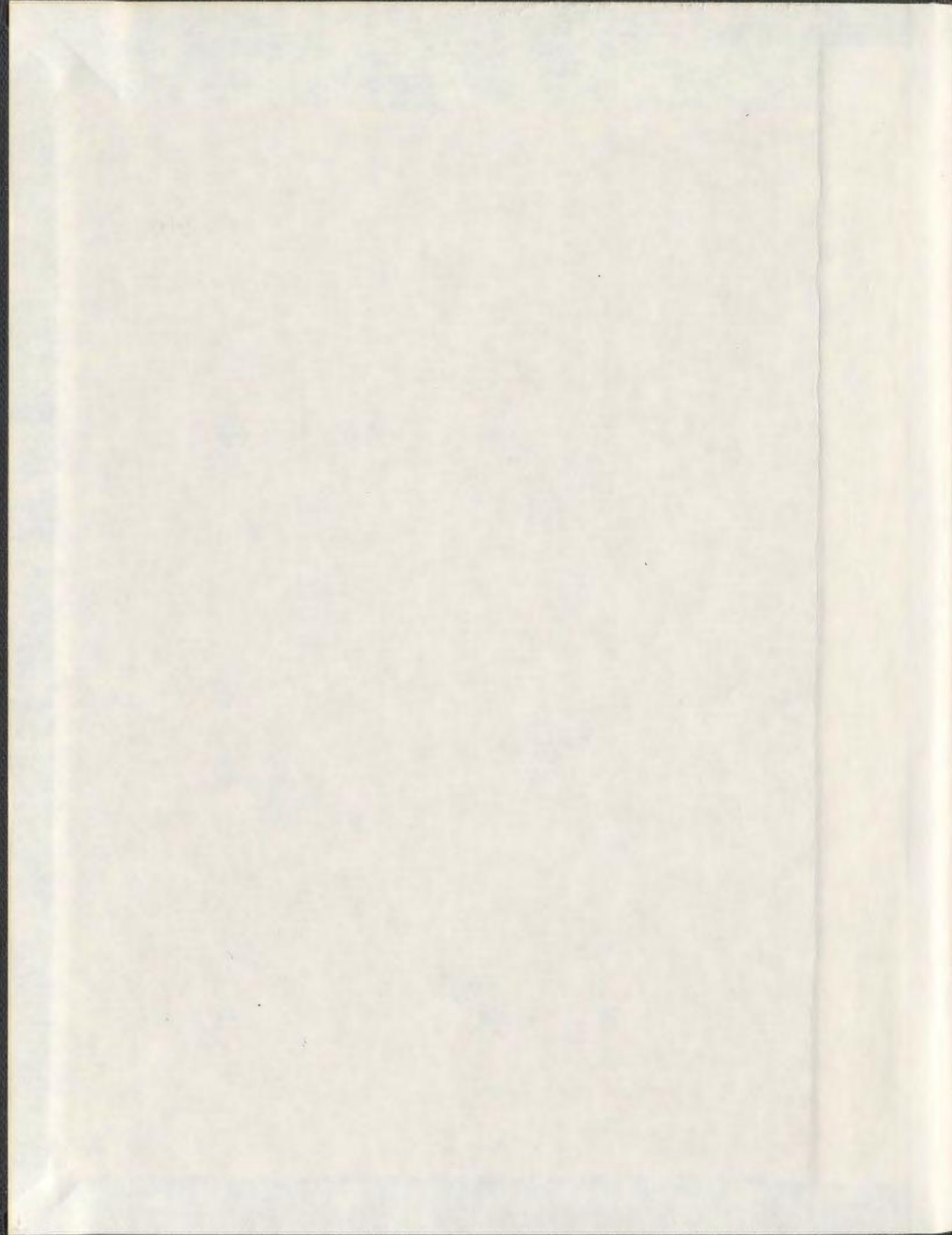


MEASURING POLICE CAUTION COMPREHENSION
IN ADULT OFFENDERS AND THE RALATIONSHIP
TO COGNITIVE FUNCTIONING

SARAH J. CHAULK



**Measuring Police Caution Comprehension in Adult Offenders and
the Relationship to Cognitive Functioning**

by

Sarah J. Chaulk

A Thesis submitted to the

School of Graduate Studies

in partial fulfillment of the requirements for the degree of

Doctor of Psychology

Department of Psychology (Faculty of Science)

Memorial University of Newfoundland

October 2013

St. John's

Newfoundland

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Abstract

In Canada, the rights to silence and legal counsel are communicated to suspects through passages of text known as police cautions. Previous research on comprehension of cautions in Canada, the United States, England and Wales, and Scotland has shown that people rarely comprehend the information contained in police cautions. In the current study, the level of comprehension of two police cautions in a sample of Canadian offenders was investigated, along with the relationship between comprehension, education, and three measures of cognitive ability. Participants ($n_1 = 60$) were asked to comprehend both a right-to-silence and right-to-legal counsel caution that was presented to them verbally. Comprehension was measured using free recall and recognition tasks (13-item true-false test). Participants were also asked to complete select subtests of the Wechsler Adult Intelligence Scales – Fourth Edition (WAIS-IV; Digit Span and Vocabulary) and a subtest of the Woodcock-Johnson Test of Achievement – Third Edition (WJ-III; Understanding Directions). The results showed that participants demonstrated a poor understanding of their legal rights, as the average comprehension score was 30%. In addition, the measures of cognitive ability were unrelated to caution comprehension scores. A *post hoc* sample ($n_2 = 16$; $N = 76$), whose comprehension was tested without hearing the cautions, demonstrated an average comprehension of 15%. The implication of these findings for the administration of police cautions to Canadian offenders is discussed.

Key words: Police Caution, Comprehension, Charter Rights, Cognitive Functioning, Listening Comprehension, Vocabulary Knowledge, Working Memory

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Acknowledgements

I would like to express gratitude and thanks to my supervisor Dr. Brent Snook and my “unofficial” supervisor Dr. Joseph Eastwood for all their time, effort, and care in reviewing my manuscripts, papers, and conference posters. I have also appreciated all the conversations that helped to clarify my thinking about this project.

To Cindy Murphy, the Executive Director of the John Howard Society of Newfoundland and Labrador, and all staff at the C-STEP program (especially Carolyn Hapgood and Jackie Warfield). Thank you for your time, space, and recruitment efforts, which have contributed to the success of this research endeavor.

I would like to thank Dr. Kellie Hadden and Dr. Jacqueline Blundell for serving on my thesis committee and for their thoughtful feedback on drafts of this dissertation. Thank you to Dr. Jackie Hesson for neuropsychological test consultations and references. I would also like to thank Gillian Morrison and Courtney Youden for their help in transcription and data collection.

I would like to acknowledge all the family and friends who have helped me see the light at the end of tunnel and helped me to keep a balanced perspective. Thanks to my PsyD cohort: Pam Button, Kathy Keating, Lisa Moores, Krystle O’Leary, and Heather Patterson for their company on this journey. I will never forget all the laughs, obstacles, cookies, tears, timbits, coffee, conversations, dinners, stress, and friendship over the past four years.

Finally and most importantly, a huge thank you to my husband Shawn Adams for everything. You have provided unwavering support to me through all the ups and downs that accompanied my pursuing this degree and completing this dissertation (as well as my

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Honours thesis). I cannot adequately express my gratitude, appreciation, and recognition of everything you have done. Thank you!

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**Measuring Police Caution Comprehension in Adult Offenders and the Relationship
to Cognitive Functioning**

Upon arrest or detention by a police organization, any individual being questioned about his or her potential involvement in criminal activity must be made aware of access to legal counsel, and although not mandatory, police officers tend to inform such individuals about their right-to-silence. These rights are guaranteed by the Canadian Charter of Rights and Freedoms, (1982; henceforth referred to as *The Charter*), which outlines that these legal rights must be provided in a clear and instructive manner (*R v. Bartle*, 1994). Due to the inherent power differential between a police officer and a detainee, case law further stipulates that a suspect can only waive his or her rights if he or she does so voluntarily, without intimidation, coercion, or deception. If a person chooses to waive his or her rights, they must have knowledge of, understand, and appreciate the consequences of what they are giving up (*Korponay v. Attorney General of Canada*, 1982; *Clarkson v. The Queen*, 1986). To determine the voluntariness of statements uttered by suspects Canadian courts use four criteria to assess the voluntariness (*R v. Oikle*, 2000). Namely, whether the police made any promises or threats, the degree of police trickery used, the individuals' ability to discern what they are saying and who they are saying it to or their operating mind, and the degree of oppression or inhumane treatment.

The passages of text that police officers read to communicate the abovementioned rights are called police cautions, or in the United States *Miranda* rights. Previous research on comprehension of cautions in Canada, the United States, England and Wales, and Scotland has shown that people rarely comprehend the information contained in police

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cautions (e.g., Cooke & Phillip, 1998; Eastwood & Snook, 2009; Fenner, Gudjonsson, & Clare, 2002; Rogers, Harrison, Shuman, Sewell, & Hazelwood, 2007). In an experimental context free of the stress and anxiety inherently associated with an interrogation situation, it was estimated that zero to seven percent of participants fully understood their legal rights (Eastwood & Snook, 2009; Fenner et al., 2002). In these studies, cautions were presented verbally as is common in Canadian and American police practice (Kassin et al., 2007; Snook, Eastwood, & MacDonald, 2010). American research has revealed that custodial suspects waive their legal rights approximately 80% of the time (Cassell & Hayman, 1996; Leo 1996). In Canada, Snook and colleagues (2010) found that 69% of suspects chose to waive their right-to-legal counsel and 75% of suspects chose to waive their right-to-silence. These figures suggest that suspects are often waiving their legal rights without an adequate understanding of what they are giving up or the consequences of doing so. The infrequent full comprehension of these rights coupled with the frequent decisions to waive them may be resulting in miscarriages of justice. Therefore, it is of utmost importance that individuals comprehend these rights, ensuring they are able to make an informed and voluntary decision to speak with police with or without legal counsel. The consequences of low comprehension are not limited to suspects; police officers also have a vested interest in ensuring comprehension. If it is demonstrated in court that a suspect did not understand the police caution, the evidence obtained in the interview and any evidence gathered as a result of the detainees statements (e.g., evidence gathered from a warrant) may be deemed inadmissible (Marin, 2004).

There have been many explanations proposed for the lack of comprehension of police cautions and *Miranda* warnings, including the complexity of the texts that

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comprise police cautions (Eastwood, Snook, & Chaulk, 2010; Helms, 2003; Rogers, Harrison, Shuman, et al., 2007), the method of delivery (Eastwood & Snook, 2009; Snook et al., 2010) and the cognitive functioning (e.g., listening comprehension) of the individual receiving the caution (Cooke & Phillip, 1998; Grisso, 1981; Rogers, Harrison, Hazelwood, & Sewell, 2007). However, this area of research is relatively new and few explanations have been found that can account for the limited understanding of *Charter* rights seen across studies.

Police Caution Comprehension Studies

Several empirical studies have been conducted in an attempt to explain the low levels of police caution and *Miranda* comprehension. Most studies have focused on one of three factors affecting caution comprehension: (a) the message or the passage of text comprising the police cautions (e.g., word length, legal language, method of delivery); (b) the sender (e.g., speed of delivery); and (c) the receiver or the person receiving the caution (e.g., occupation, age, cognitive abilities). The majority of research pertaining to caution comprehension has investigated the message of police cautions. In contrast, relatively few studies have examined the sender or the receiver. The literature pertaining to each of these three factors is reviewed below.

The message. Content analyses of police cautions have demonstrated that they are overly complex. This is a potential explanation for a low percentage of the population being able to fully understand their rights. For instance, Rogers, Harrison, Shuman, et al. (2007) conducted an extensive complexity analysis of *Miranda* warnings used by different police organizations. The reading complexity level of each warning was measured using three independent readability tools. They found that the variability in the

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content and length ($M = 92$ words) of *Miranda* warnings was substantial. According to these researchers, the warnings are difficult to remember and understand because they violate what we know about the capacity of human working memory, as identified by Miller (1956). Even when accounting for increases in working memory by the use of chunking techniques or other mnemonic devices, it is unlikely that a passage longer than 75 words would be processed accurately (Rogers, Harrison, Shuman, et al., 2007). Considering the length of *Miranda* warnings, most individuals would not be able to adequately process an average *Miranda* with a length of 92 words.

Rogers, Harrison, Shuman, and colleagues (2007) found that the reading comprehension level also varied greatly ranging from grade 2.8 to postgraduate. They suggested that the complexity can be attributed to legalistic or abstract terms and phrases that do not communicate these legal rights clearly. An earlier analysis by Helms in 2003 complements the findings of Rogers, Harrison, Shuman et al. He found the average grade level for comprehension of the *Miranda* warnings to be seventh grade, with a range from fourth grade to tenth grade. He also suggested that the legalistic terms found within police cautions are problematic. Helms proposed that the use of words and phrases rarely found outside the criminal justice system complicate passages and ultimately confuse people. In a 2007 study, Helms investigated the specific components of *Miranda* warnings and the variability within each warning. It was found that including non-essential material within the warning served to cloud and complicate the already complex passage by distracting the suspect from the important key information. This finding is consistent with past research and indicates that reducing the number of uncommunicative legalistic terms is a potential way to simplify *Miranda* warnings.

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A more recent two-part study collected a sample of police caution cards from police organizations across Canada and analyzed their reading complexity using five readability measures (Eastwood et al., 2010). Results showed that Canadian cautions are similar to *Miranda* warnings—both longer than necessary. The results of this study also showed that Canadian police cautions are overly complex, and that there is a large variation across jurisdictions. All of the cautions contained difficult words; most of the cautions contained low frequency words, and most contained more than 75 words.

However, fewer than half of the cautions fell outside of acceptable limits on sentence complexity (see Rogers, Harrison, Shuman et al., 2007). Finally, the average grade level required to read these cautions fell between sixth and seventh grade. In sum, the content of police cautions like that of *Miranda* warnings is overly complex and lengthy.

Although there are currently no agreed upon guidelines in the literature or in the criminal justice system regarding appropriate length and complexity, there have been many studies outlining what level of complexity and length would overwhelm the average person's cognitive abilities.

This research has focused mainly on the reading complexity of police cautions and *Miranda* warnings, while most cautions are delivered orally (Snook et al., 2010). Eastwood and colleagues (2010) examined the listening comprehension of three cautions, which varied in reading complexity, use of infrequent words, and use of legalistic terms. When participants were presented one of these three versions of right to silence and legal counsel, no difference was observed in amount of material comprehended (Eastwood et al., 2010). Moreover, participants understood, on average, approximately one third of the material contained within the caution despite the varying levels of reading complexity.

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An earlier Canadian study by Moore and Gagnier (2008) examined the comprehension of four versions of the right-to-silence caution in a sample of university students. Three versions were slightly altered by the authors to clarify the meaning of the caution while one remained standard. Despite these clarifications, there was no improvement in comprehensibility. Fewer than half of the participants were able to recall the information pertaining to the right-to-silence. These results are consistent with the overall trend of low comprehension of Canadian police cautions observed across studies.

These findings are not limited to Canada and the United States. Studies in England and Wales have also assessed whether people can understand police cautions. A study by Clare, Gudjonsson, and Harari (1998) examined the comprehension level of a new brief version of their police caution among a sample of high school students, the general population, and police officers. The new caution was introduced after it was found that a longer proposed version was too complex (Gudjonsson & Clare, 1994). When they compared the participants' ability to explain both versions of the caution no differences in comprehension of the two were found, despite the new version being more succinct. They found a low level of comprehension (7-8 %) in the sample of high school students and general population, while police officers comprehended about half (48%) of the content. Other studies conducted in England, Wales, and Scotland found similar deficits in police caution comprehension (e.g., Cooke & Phillip, 1998; Fenner et al., 2002).

More recent research has made some progress by modifying cautions to increase their ability to be understood and retained by participants. Eastwood and Snook (2009) found that four and seven percent of participants understood the right-to-silence and

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right-to-legal counsel, respectively, when delivered verbally. The number of participants who demonstrated a full understanding increased significantly to 48% and 32% when the caution was also presented in written format. The effects of modifying the delivery of the right-to-legal counsel caution, according to three listenability factors (instructions, listing, and explanations) are promising. These modifications included alerting the interviewee that they were about to hear some important information, informing them to the number of pieces of information and delivering them in a list-wise fashion, and adding further explanations by paraphrasing each component after it was read. Participants who received the caution containing all three listenability modifications had the highest level of comprehension at 73.3%, as compared to 37.2% for those who received the caution with no modifications (Eastwood & Snook, 2012). These three modifications were proposed as a means to reduce the demands on the cognitive abilities (e.g., working memory) of the person receiving the caution. Similar results were found in a study examining the right-to-silence caution with modifications (e.g., listing, explanations) where the participants were able to better recall the components of this right as compared to those who received a caution with no modifications (Davis, Fitzimmons & Moore, 2011). Altering the modality of police caution delivery appears to increase comprehension levels and these studies represent promising results. However, the moderate levels of comprehension found even under optimal conditions (i.e., an experimental situation free of stress and anxiety inherent in an interrogation) and with highly educated university participants suggest that individuals situated in a stressful interrogation situation may have more difficulty understanding *The Charter* cautions.

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The sender. The comprehension of oral passages may be further complicated by characteristics of oral messages; that is, the speakers' pronunciation, stress, intonation, and speed (Hausfeld, 1981; Hron, Kurbjahn, Mandl, & Schnotz, 1985). The speed at which the police officer verbally delivers the caution may influence caution comprehension (Snook, Eastwood & MacDonald, 2010; MacDonald, Eastwood, & Snook, 2010). Previous research suggests that to maximize understanding speech rates should not exceed 200 words per minute (Carver, 1982; Jester and Travers, 1966). However, research into the delivery rate of police cautions has shown that both the right-to-silence and right-to-legal counsel cautions were delivered at a rate that exceeds an acceptable speed (Snook et al., 2010). Speech rates greater than 200 words/minute are likely to cause a decrease in comprehension, given the demands placed on cognitive functioning. (Carver, 1982; Jester and Travers, 1966). However, a study by MacDonald and colleagues (2010) found that rates of caution comprehension were consistently low, with participants recalling on averaging around 30% of the caution and the speed of delivery appeared to have no effect on comprehension rates. The authors proposed that this might be resulting from the general incomprehensibility of the caution in its current form or that speed of delivery is not related to comprehension.

The receiver. There have been a myriad of possible reasons proposed to account for the poor understanding of *Miranda* warnings and police cautions when considering the receiver or recipient of such warnings. Factors such as age, overall intellectual ability, verbal IQ, listening and reading comprehension, and working memory have all been proposed in the literature as potential factors affecting comprehension (Eastwood et al., 2010; Fulero & Everington, 1995; Grisso, 1981; Rogers, Harrison, Hazelwood et al.,

2007). To date however, there has been a very limited amount of research examining the abovementioned factors or studies sampling criminal justice populations. Of the research that has been completed, the focus has been on intellectual functioning and experience with the justice system.

Intellectual functioning. Some studies have examined caution comprehension among suspects, offenders, and inmates¹ (e.g., Grisso, 1981; Fenner et al., 2002; Rogers, Harrison, Hazelwood, et al., 2007). A classic set of studies by Grisso (1981) examined *Miranda* comprehension in juvenile offenders, adult offenders, and adult non-offenders using a combined method of presenting *Miranda* (i.e., written and verbal). Grisso found that 20% of juvenile offenders were able to accurately recall each of the *Miranda* warnings, while more than half of the sample displayed deficient understanding of the *Miranda* rights. In comparing the adult samples to the juveniles, Grisso (1981) found that the average comprehension scores were significantly higher in adults than those obtained from the juvenile sample (across IQ levels). Approximately 42% of the adults could recall fully the details contained in the warnings as compared to 20% of the juveniles. In sum, his results indicated that comprehension increased as age and IQ increased and these two variables taken together were able to account for 33% of the variance in comprehension scores. The correlation coefficients between IQ and comprehension were much larger than those between age and comprehension suggesting that IQ may be a better indicator of *Miranda* comprehension than age.

¹ The terms suspect, offender, and inmate have different legal meanings. A suspect is a person suspected of committing a crime, an offender is someone who has been convicted of a crime, and an inmate is a person serving time in prison or jail. However, for the purposes of discussion here these terms will be used interchangeably to indicate a person who has had contact with the criminal justice system.

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In a study directly comparing adult offender and non-offender populations, Grisso (1981) examined level of *Miranda* comprehension, age, and IQ. The majority of participants were not able to fully recall the *Miranda* warnings and less than 50% of them were able to correctly define the word *right*. No dramatic difference in comprehension between the adult offender and non-offender groups was found, with the exception of measures of *Miranda* vocabulary where the non-offenders scored significantly higher. The participants from both the offender and non-offender groups were of similar age, race, socioeconomic status (SES), and mean IQ (89 and 92, respectively). The non-offender sample was thus very similar to the offender sample, but dissimilar to a general population sample who would have a mean IQ of approximately 100 (Wechsler, 2008). Considering Grisso's earlier findings that IQ was the strongest predictor of comprehension, it seems logical that when comparing two samples with similar levels of intellectual ability that they would demonstrate similar levels of comprehension.

Fenner and colleagues (2002) also directly compared caution comprehension in suspect and general population samples. The general population demonstrated higher intelligence, while the suspect group reported more frequent exposure to police cautions. After those in the general population group were excluded for having an IQ greater than 100, both groups were comparable in terms of average IQ. Understanding of the caution was very limited in both groups. When the cautions were presented in their entirety, none of the participants in either group were able to correctly explain the caution. Moreover, when the caution was presented sentence-by-sentence, only 10% of the suspect group and 13% of the general population group were able to correctly recall the caution. Of interest was the finding that none of the participants were able to demonstrate a full

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understanding of the caution, despite 96% of the participants stating that they had understood it (Fenner et al., 2002). Although most individuals report that they have comprehended their legal rights in actuality these reports are not consistent with levels of comprehension. Similar findings have been reported in other studies in England (Clare et al., 1998), Scotland (Cooke & Philip, 1998) and the United States (Rogers, Harrison, Hazelwood et al., 2007). Fenner and her colleagues (2002) emphasized that the most important consequence of these findings is that police cautions are not fulfilling their intended aim of communicating legal rights to the suspect population.

Experience with the justice system. Research has consistently demonstrated that experience with the criminal justice system does not increase comprehension of police cautions or *Miranda* warnings. A study of *Miranda* comprehension revealed that the participants with the poorest understanding had extensive exposure to *Miranda* warnings, with an average of 10.52 previous arrests (Rogers, Harrison, Hazelwood et al., 2007). Grisso also concluded that experience with the justice system alone did not improve individuals' comprehension of their legal rights. In the UK, Fenner and colleagues (2002) also found that differences in experience with the justice system had no impact on comprehension of police cautions.

Cognitive Functioning

As described above, overall cognitive functioning (or IQ) has been found to be related to *Miranda* and police caution comprehension (Cook & Phillip, 1998; Grisso, 1981) and many studies have hypothesized which specific aspects of cognitive functioning account for this relationship. However, very few studies have empirically investigated the role of specific cognitive abilities in relation to police caution

comprehension. Notwithstanding a few previously discussed studies, most have simply examined the relationship between general or overall IQ and caution comprehension but have not directly examined specific cognitive factors which comprise general intelligence and their relationship to caution comprehension (Cook & Phillip, 1998; Fenner et al., 2002; Rogers, Harrison, Hazelwood et al., 2007). Therefore, an objective of the current study was to examine some of these component parts of cognitive functioning (i.e., vocabulary knowledge, working memory, and listening comprehension) and determine their role in the comprehension of legal rights. These three cognitive factors were selected after review of the caution comprehension literature where they were proposed as possible factors affecting comprehension or were found in the cognitive literature related to the understanding of passages of text that are presented orally.

Listening comprehension. Instructional texts such as police cautions place special demands on the cognitive processing of the recipient. Hron and colleagues (1985) have found that texts designed for oral discourse frequently do not take into account the requirements necessary for auditory processing. Moreover, the listener cannot stop during processing to organize the information they have already processed, and the text is presented at a preset speed to which the listener has to adjust his or her cognitive processing. Most importantly, due to the constant flow of new information presented to the listener during oral discourse, the listener may be unable to retain the information for long periods of time and is forced to process it immediately in order to continue to receive the rest of the information. The process of listening comprehension is much different from that of reading comprehension where the reader can process the text at his or her desired speed, can stop at anytime to process and organize the information, and has

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the option of reviewing the text to ensure understanding (Hron et al., 1985). Therefore, listening comprehension may play a large role in the suspects' ability to understand their rights. To produce ecologically valid estimates of comprehension police caution comprehension tests should mimic as closely as possible the manner in which police cautions are delivered in practice (e.g., free recall procedure).

When using free recall to measure comprehension, there have been mixed results regarding which type of discourse produces more accurate recall. Berger and Perfetti (1977) suggested that readers and listeners tend to recall different types of information, with listeners recalling the gist of the text, while readers recall more structural or verbatim features of the text. In other words, in oral language the overall meaning of the message is retained, where the actual words and syntax are lost. Conversely, in written language the words and syntax are retained and the recall is closer to a reproduction of the words and sentences. In accordance with these results similar studies have suggested that listeners are at a disadvantage as compared to readers because listening comprehension is difficult at the high speaking speeds that are reported. This suggests that reading and listening place different demands on cognitive processing (Durell, 1969). Given the substantial increase in police caution comprehension when participants are presented with a written form or when listenability of the passage is improved as has been found in recent research, it seems that readers are afforded advantages when compared to listeners (see Eastwood & Snook, 2009; 2012).

Working memory. Working memory is a cognitive ability that allows us to simultaneously maintain information in conscious awareness, perform some manipulation, and produce some outcome (e.g., Baddeley, 2002). Working memory is an

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essential component of reasoning and other higher order cognitive processes also called fluid intelligence (i.e., novel problem solving; Yuan, Steedle, Shavelson, Alonzo, & Oppezzo, 2006). It has also been proposed as a cognitive factor potentially affecting caution comprehension (Cooke & Phillip, 1998; Eastwood et al., 2010). Again, because the caution is delivered verbally in police practice (Snook et al., 2010) the suspect is required to hold all information in their working memory while simultaneously interpreting its meaning (Shoamy & Inbar, 1991).

The passage of text that comprises the police caution must be held in the receiving individuals' working memory while he or she simultaneously uses this information to make an informed decision about whether or not to waive his or her rights. Given the average word length of the cautions and the capacity of working memory it is unlikely, even considering the use of mnemonic devices, that an individual would be able to hold all the pieces of information in order to comprehend the legal rights and then make a decision regarding them (Miller, 1956).

Verbal comprehension. Another potential predictor in determining an individual's ability to comprehend their legal rights is verbal comprehension or verbal IQ (Fenner et al., 2002). Verbal comprehension is defined as the extent to which an individual understands the meaning of words and the ability to adequately express themselves verbally (Groth-Marnat, 2009). This includes an individual's degree of language development, ability to work with abstract semantic information, word knowledge, and verbal concept formation. Underlying these skills and abilities is crystallized intelligence, a factor of general intelligence. Cattell (1971) defined crystallized intelligence as the ability to use skills, knowledge, and experience. A

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person's level of crystallized intelligence is indicated by a person's depth of and breadth of acquired general knowledge, vocabulary, and the ability to reason using words and numbers. Word knowledge and vocabulary are therefore important factors to consider in investigating police caution and *Miranda* comprehension due to the complex and legalistic terms often contained in these passages (Eastwood et al., 2010; Helms, 2007).

Factors Influencing Caution Comprehension

There are innumerable potential influences on caution comprehension and waivers. These include but are not limited to: stress and anxiety, cultural factors, power imbalances, method and speed of delivery, mental illness, literacy, education, and intellectual functioning. Most of these factors are likely to further impede an individual's ability to understand and appropriately exercise their legal rights. The following discussion will address mental illness, literacy and education, and intellectual functioning, all of which are factors relevant to the current investigation.

Mental illness. Offenders have higher prevalence rates of mental illness and substance abuse compared to the general population (Ditton, 1999; Teplin, 1990; Teplin, 1994). It is estimated that nearly 62% of jail detainees and inmates have experienced mental illness at some point in their lifetime, as compared to approximately 30% of the general population (Eaton, Regier, Locke, & Taube, 1981; Teplin, 1994). In a sample of American jail detainees it was found that nearly 35% had a current disorder, other than antisocial personality disorder (ASPD; with 50% of the sample meeting criteria for ASPD). The rates of substance use disorders were also extremely high—29.1% currently and 61.3 % lifetime prevalence (Teplin, 1994). Such findings are consistent with prevalence estimates of mental disorders found in Canadian offender populations (see

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Arboleda-Florez et al., 1995; Hodgins & Côté, 1990) and other institutions in the United States (see Ditton, 1999; Lamb & Weinberger, 1998).

Certain mental illnesses have been shown to have a negative impact on an individual's cognitive functioning (Castaneda et al., 2010; Fals-Stewart & Bates, 2003). Some of the symptoms of psychopathologies such as schizophrenia and other serious mental disorders are associated with adverse effects on certain aspects of cognitive functioning including attention, working memory, cognitive control, and the learning of new information (Castaneda et al., 2010; Fals-Stewart & Bates, 2003; Palmer & Jeste, 2006). These impairments in cognitive functioning, secondary to mental illness may interfere with an individual's ability to understand and to make the informed decisions that are required when being asked to comprehend the legal rights contained in cautions.

Although rare, there have been a few studies investigating *Miranda* comprehension in persons with mental illness. One study examining *Miranda* comprehension in a sample of psychiatric patients found that those with psychosis showed impairment in understanding across all measures of comprehension as compared to patients without psychosis (Cooper & Zapf, 2008). These patients also performed poorly on the Wechsler Abbreviated Scales of Intelligence (WASI) as compared to their non-psychotic counterparts. The symptoms of psychosis seem to impair individuals' cognitive functioning as well as their understanding of *Miranda*. It is also noteworthy that these psychiatric symptoms were able to explain some variance (i.e., as much as 17%) in *Miranda* comprehension despite the effects of IQ being controlled for. This provides evidence that psychiatric symptoms may place an added barrier to *Miranda* comprehension above and beyond their impact on cognitive functioning. A similar study

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conducted by Rogers, Harrison, Hazelwood et al. (2007) found that 71% of participants had psychiatric diagnoses on their medical chart. Diagnostic variables including Global Assessment of Functioning (GAF) were able to account for 17% of the variance in *Miranda* understanding.

Literacy and education. Individuals involved with the criminal justice system tend to have low levels of literacy and education (Haigler, Harlow, O'Connor, Campbell, 1992; Harlow, 2003; Muirhead & Rhodes, 1998). As a result, the problem of overly complex cautions is aggravated by the limited reading ability of most suspects. A Canadian study examining the literacy levels of Canadian federal offenders found that approximately 80% were functionally illiterate (Muirhead & Rhodes, 1998). The Correctional Service of Canada defines functional illiteracy as a reading level below 10th grade (Porporino & Nouwens, 1991). Approximately twice as many inmates have not completed high school (i.e., 41%) as compared to the general population (i.e., 18%; Harlow, 2003). It has also been found that the average reading level of the American correctional population is between fourth and sixth grade (Muirhead & Rhodes, 1998). Such findings suggest that criminal suspects would have difficulty assimilating and comprehending complex or lengthy passages. With the majority of police cautions being both complex and lengthy, a problem exists in ensuring that suspects understand their rights.

Intellectual disability. Intellectual disability (or Mental Retardation) is defined in the *Diagnostic and Statistical Manual of Mental Disorders-Forth Edition, Text Revision* (DSM-IV-TR) as an intelligence quotient (IQ) less than 70 and significant limitations in adaptive functioning (APA, 2000). There are a wide variety of terms used to describe

intellectual disability. For example, mental retardation, cognitive impairment, intellectual impairment, and while some hold different meanings for the purpose of the current research they will be used interchangeably. The DSM-IV-TR further articulates four levels of severity of intellectual disability (i.e., mild, moderate, severe, and profound) depending on IQ and level of impairment in adaptive functioning. Individuals who fall into this category have limited cognitive abilities, which may further decrease their ability to understand their legal rights as suspects (Everington & Fulero, 1999). Individuals with intellectual disability are overrepresented in the prison population (O'Connell, Garmoe, & Goldstein, 2005). More than four percent of people in American prisons are diagnosed as intellectually disabled, while the prevalence in the general population is only one to two percent (Veneziano & Veneziano, 1996). Police caution studies have found similar trends (Fenner et al., 2002). As mentioned previously, several studies have investigated the relationships between IQ and comprehension of legal rights (e.g., Grisso, 1981). Studies have demonstrated a relationship between IQ and police caution comprehension. Moreover, individuals with a diagnosis of intellectual disability have been shown to exhibit greater difficulty than persons with average IQs in paraphrasing the warnings (Everington & Fulero, 1999). Therefore, it is unlikely that individuals with intellectual disability will be able to understand their rights as contained within police cautions without significant modifications to the administration and delivery.

With regards to waivers, the literature suggests that individuals with intellectual disability are suggestible; that is, they are more easily deceived by leading questions in interrogations (Everington & Fulero, 1999). O'Connell and colleagues (2005) found that mild intellectual disability (IQ 59-75) results in a higher propensity to change responses

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to questions depending on the demeanor of the interviewer (e.g., friendly or unfriendly). In addition, these individuals tend to acquiesce or to provide affirmative answers to questions more frequently than individuals of average intelligence (Clare & Gudjonson, 1993; Palma, 1990). This finding would call into question the voluntariness of right-to-silence or right-to-legal counsel waivers for individuals with impaired cognitive abilities, especially when comprehension is assessed using a yes or no question (i.e., Do you understand?).

The Current Study

This study extended previous research in four ways. Primarily, it obtained an estimate of the caution comprehension level of a sample of Canadian offenders. Secondly, it investigated the relationship between specific cognitive factors (i.e., working memory, verbal comprehension, and listening comprehension), education, and caution comprehension. Thirdly, two methods of testing comprehension (i.e., free recall and recognition) were utilized to determine what participants know about their rights to silence and legal counsel, and whether they can discriminate between statements that violate these rights from statements that correctly represent them. Finally, a *post-hoc* objective of the study was to determine if the delivery of the police cautions is adding to the offenders' level of knowledge of the right-to-silence and the right-to-legal counsel. This final objective helped establish a baseline level of knowledge of the rights to silence and legal counsel and allowed for a comparison between offenders who had heard the police cautions and those who had not.

Given the results of previous research the hypothesis is that the offender population would demonstrate poor understanding of their legal rights (< 50%), despite

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their increased exposure to the criminal justice system. An additional hypothesis is that offenders who have strengths in working memory, listening comprehension, verbal comprehension, or higher levels of educational achievement would show a greater understanding of the cautions as compared to offenders with weaknesses in these cognitive areas. A third hypothesis is that offenders would demonstrate better understanding of their rights on the recognition measure as compared to the free recall measure. The *post-hoc* and fourth hypothesis predicts that offenders in both the caution and no-caution group would demonstrate similar levels of understanding (i.e., approximately 30% of the material; see Eastwood et al., 2010).

The findings of this research will help shed light on the cognitive abilities related to police caution comprehension. In exploring the level of caution comprehension among a sample of Canadian offenders, the goal is to ensure that the legal rights of Canadian citizens are being upheld and protected. Additionally, further exposure and dissemination of police caution comprehension research, especially in vulnerable populations, may highlight the importance of this issue in the criminal justice system and for police organizations in particular.

Method

Participants

The sample consisted of 82 individuals who were convicted of a criminal offence and were receiving service through the John Howard Society (JHS) of Newfoundland and

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Labrador². Sixty-two participants (i.e., the caution condition) were originally sampled and a second group (the no-caution condition; $n = 20$) were sampled *post-hoc* to explore the hypotheses and clarify the results. Six participants were excluded, two from the caution group and four from the no-caution group, resulting in an overall sample size of 76 ($n_1 = 60$, $n_2 = 16$). One participant, a 17-year-old male, was excluded as he was too young to consent to the study. Five participants' data were also excluded, four due to technical issues with the recording equipment and one due to a hearing impairment (which precluded the use of the standardized caution administration procedure). Additionally, in the no-caution group one participant completed the study but failed to complete the History Questionnaire.

Participants in the caution condition were adults over the age of 19 years with a mean age of 37 ($SD = 12.4$; range: 19-74; $Mdn = 35$; $Mode = 53$). Seventy-two (95%) participants were male, 67 (88%) were Caucasian, eight (11%) were Aboriginal and one (1%) was African. In the no-caution condition the mean age was 36 ($SD = 12.89$; range: 20 - 62). Fifteen participants were male (94%) and one (6%) was female. Fourteen (88%)

² JHS mandate is to provide service to individuals who have had conflict with the law or are at risk for conflict, to provide public education on matters relating to the justice system and promoting changes in the law and the administration of justice which will lead to a humane, just, and effective treatment of individuals and safer communities. Participants in this study were recruited from two programs within the JHS. One was the Cognitive Skills Training Employment Preparation Program which is for offenders and ex-offenders in the community. Services span two main areas: cognitive restructuring (e.g., Community Reintegration Program, Generic Relapse Prevention) and employment skills (e.g., Workplace Safety Program). The other was the Howard House, a community residential centre for adult male offenders' on day parole, full parole, temporary or statutory release.

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participants were Caucasian and two (12%) were Aboriginal. The average number of years of education was comparable in the caution and no-caution conditions. In the caution group the average number of years of education was 11.5 ($SD = 2.53$, range: 7-19) and in the no-caution group it was 11.3 years ($n = 16$, $SD = 2.74$, range: 4-15). Overall, 23 (30%) of the participants had completed high school or its equivalent. With regards to incarceration, 57 (75%) participants in the caution group and 15 (94 - 100%; this information was missing from one participant) in the no-caution sample had been previously jailed.

Materials

The materials for the caution group included a Willingness to Participate Form, an Information Letter, an Informed Consent Form, a Demographics Questionnaire, a History Questionnaire, a Debriefing Form (see appendix A), the Vocabulary and Digit Span subtests of the Wechsler Adult Intelligence Scale-Forth Edition³ (WAIS-IV; Wechsler, 2008a), the Understanding Directions subtest of the Woodcock-Johnson Tests of Achievement-Third Edition⁴ (WJ-III; Woodcock, McGrew & Mather, 2007), the Royal Canadian Mounted Police cautions (i.e., right-to-silence and right-to-legal counsel), two police caution videos, two versions of a 13-item true-false Test of Comprehension (see appendix A), a Caution Dictionary and Coding Guide (see appendix B), audio recording software (i.e., Garage Band '08 for mac), and a laptop.

The materials for the no-caution group consisted of a revised Willingness to Participate Form, Information Letter, Consent Form, Debriefing Form, and Free Recall

³ The WAIS-IV is a secure measure and is therefore it is not appended.

⁴ The WJ-III is a secure measure and therefore is not appended.

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Script (see appendix C). The other materials included the Demographic Questionnaire, History Questionnaire, and the 13-item true-false Tests of Comprehension (see appendix A), Caution Dictionary and Coding Guide (See appendix B), audio recording software, and a laptop.

Police caution videos. Two separate police caution videos were recorded, one displaying the right-to-silence and the other the right-to-legal counsel caution. Research on comprehension of verbally delivered passages suggests that the upper range of acceptable speech rates is between 150 and 200 words per minute (Carver, 1982; Jester & Travers, 1966). Each of the two cautions was read by an adult male at an acceptable rate of speech for listening comprehension (i.e., < 200 words / minute) to ensure optimal conditions. The right-to-silence was read at a rate of approximately 187 words / minute and the right-to-legal counsel caution was read at 173 words / minute.

RCMP cautions. The two cautions used in this study were taken from the Royal Canadian Mounted Police ("B" Division, Newfoundland and Labrador). The right-to-silence caution in this study is written at a 6.2 grade reading level and the right-to-legal counsel is written at an 11.6 grade reading level, for a combined grade level of 9.1, as calculated by the Flesch-Kincaid formula in Microsoft Word. Although police are only required by case law to inform a suspect of his or her right-to-legal counsel (*R v. Papadopoulos* 2006), they commonly deliver both the right-to-silence and right-to-legal counsel cautions consecutively (Snook et al., 2010). For this reason, the current study will examine participants' comprehension of both cautions. The two cautions to be used in the research are as follows:

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Right-to-Silence Caution:

You do not have to say anything unless you wish to do so. You have nothing to hope from any promise of favor and nothing to fear from any threat whether or not you say anything. Anything you say may be used as evidence.

Right-to-Legal-Counsel Caution:

It is my duty to inform you that you have the right to retain and instruct counsel of your choice in private and without delay. Before you decide to answer any question concerning this investigation you may call a lawyer of your choice or get free advice from Duty Counsel. If you wish to contact Legal Aid duty counsel I can provide you with a telephone number and a telephone will be made available to you.

Wechsler Adult Intelligence Scale-Forth Edition. Select subtests of the WAIS-IV, Vocabulary and Digit Span, were used to measure verbal comprehension and working memory, respectively. The WAIS-IV (Wechsler, 2008a) is a standardized test that has been validated using a large Canadian normative sample. It was used in the current study to obtain estimates of verbal comprehension and working memory. The subtests are scored using Canadian norms which yield age-corrected scaled scores ranging from 1 to 19, with the average range being 8 to 12 (based on the normative Canadian population). These scores correspond to percentile scores, which represent an individuals' performance as compared to his or her age-related peers. For example, a scaled score of 8 corresponds to the 25th percentile, meaning that this individual performed better than 24% of his or her same aged peers.

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The subtests were administered by a trained examiner and did not require the examinee to read or write during the test. The WAIS-IV has well-established psychometric properties (Groth-Marnat, 2009), and is the most widely used test of cognitive abilities (Archer, Buffington-Vollum, Stredny & Handel, 2006). The Vocabulary subtest assesses the participants' accumulated verbal learning, language development, and word knowledge, by requiring participants to explain the meaning of a list of words verbally. The words for the vocabulary subtest are presented to the examinee both orally and verbally. This subtest has been shown to have excellent internal consistency ($r = .94$) and test-retest reliability ($r = .89$; Sattler & Ryan, 2009). The Digit Span subtest is considered to be a test of working memory and attention. It requires the examinee to recall and repeat auditory information in the proper sequence. This subtest also has excellent internal consistency ($r = .93$; Sattler & Ryan, 2009).

Woodcock-Johnson Tests of Achievement-Third Edition. The WJ-III is a standardized test that yields estimated grade-level performance scores, which range from 0 to 18 (WJ-III; Woodcock et al., 2007) and has been validated on a large American normative sample. A select subtest of the WJ-III was used (i.e., Understanding Directions) to measure listening comprehension. This subtest is an oral language measure and the task requires the participant to listen to a set of directions and then follow the directions by pointing to objects in a picture. The Understanding Directions subtest has reliability ranging from $r = .77$ to $.93$ for adults aged 20 to 79 (McGrew, Schrank, & Woodcock, 2007). It is a valid measure of achievement and has convergent validity with other measures of intelligence and achievement (Groth-Marnat, 2009; McGrew et al.,

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2007). The WJ-III was administered by a trained examiner and did not require the examinee to read or write during the test.

True-false test of comprehension. Many alternate methods of measuring comprehension have been developed and some researchers suggest using free recall tasks in combination with other tests of comprehension (see Grisso, 1981; Rogers, Harrison, Hazelwood et al., 2007). Therefore, as an alternate means to measure comprehension, a 13-item true-false test was constructed to reflect the 13 components of the right-to-silence and right-to-legal counsel cautions. This measure does not require participants to construct verbal responses and was constructed based on Grisso's (1981) Comprehension of Miranda Rights True or False test, but altered to reflect Canadian legal rights. Twenty-six items were developed by creating a true item and a false item for each of the 13 components of the cautions. These 26 items were split to make two alternate but equivalent 13-item tests (i.e., Forms A & B). A descriptive analysis of item response consistency was calculated and on average participants responded consistently to 83% ($n = 16$, $M = 10.81$, $SD = 1.72$, range: 8-13) of the items when administered both versions of the test.

Response style. Much of the research involving offenders recommends utilizing a measure to examine potential biases in participants' response style (Rogers, 2008). Malingering typically occurs when there is some motivation to do so, financial, legal, or otherwise (Rogers, 2008). With regards to the current study, there was no explicit motivation to incite the participants to respond unreliably. First, they were informed about the anonymous nature of the study making it impossible (experimental data was inextricably separated from the demographic information) for the results of cognitive

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testing to be utilized in any current legal proceedings. Second, they were offered \$10 for their participation regardless of their performance, therefore removing any financial motivation. Finally, at the outset of the session each participant was informed vaguely about the purpose of the study simply stating that it was concerning legal rights.

Participants were only informed of the main purpose of the study during the debriefing phase at the end of the session. Although a formal malingering measure was not used, by examining the patterns of scores on the cognitive testing it was possible to estimate the probability that participants had responded deceptively (Jasinski, Berry, Shandera, & Clark, 2011).

The Reliable Digit Span (RDS) is a measure designed specifically to detect malingering and is derived from the Digit Span subtest of the WAIS-IV. It has been widely studied and Axelrod and colleagues (2006) found that it is an effective and reliable way to distinguish persons with brain injury from those with a feigned injury. The RDS score is calculated by adding the longest string of forward digits correctly recalled and the longest string of backward digits correctly recalled on the Digit Span subtest. Axelrod and colleagues suggest that if the raw score total is less than seven then it is possible that the individual is malingering (Larrabee, 2007). The limitation of RDS is due to the calculation from raw scores, which are not age-corrected; therefore, age is a potential confounding factor in this analysis.

A second psychometric indication of malingering was examined by calculating the Vocabulary-Digit Span difference (V-DS) score in subtracting the scaled score of the Digit Span subtest from that of the Vocabulary subtest. In this case, if the participant's scores yield a difference greater than five then this may indicate response bias (Larrabee,

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2007). This cutoff is based on a standardized sample where less than 5% of the population yielded a difference greater than five (Iverson & Tulskey, 2001). Unlike the RDS, the V-DS score is calculated using scaled scores, which are age-corrected. The Vocabulary subtest is the best single predictor of general intelligence and does not decline with age. However, its limitation is related to its high correlation with educational attainment (Groth-Marnat, 2009). The literature indicates that offender populations tend to have low levels of educational achievement as compared to the general population (Harlow, 2003; Muirhead & Rhodes, 1998). Therefore, the suggested cut-off score may not provide a valid reflection of response bias in this population due to their low level of educational achievement (i.e., less than 30% of the sample has completed high school or its equivalent). Given the limitations in each of these indices of malingering in relation to the population sampled in this study, both were calculated.

Procedure

Participants were approached by JHS staff and asked about their interest in participating in the study and were provided with a willingness to participate form.⁵ All information contained within this form was also communicated verbally to accommodate for any literacy issues in this population. Each participant was given \$10 for his or her participation in the study. The individuals who agreed to participate were scheduled for an appointment by JHS staff. A staff member then informed the principal researcher of the appointment times and dates.

⁵ The Executive Director of the JHS gave permission to conduct this research within their organization and for their staff to facilitate the recruitment of participants.

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Caution condition. Each testing session lasted approximately one hour and all sessions took place in an office at the JHS. To begin each session participants were provided with an information letter and a consent form while the researcher verbally informed the participant of all information contained within both forms. Verbal consent was obtained and documented by recording the date and the researcher's initials on the consent form before proceeding. Participants watched a short video of an adult male reading each of the police cautions. A free recall task occurred immediately following each video, where the participant expressed verbally what he or she understood and could remember from each video. All responses were audio recorded and later transcribed for coding. Each participant also completed a 13-item true-false test as an alternate means of measuring comprehension. The two tests of comprehension (i.e., free recall and recognition) were not counterbalanced to avoid introducing information to the participants pertaining to the rights to silence and legal counsel prior to completing the free recall task. However, the two police caution videos and free recall tasks were counterbalanced. The three cognitive measures were also counterbalanced to control for practice or fatigue effects. To determine the participants' level of cognitive functioning, the principal researcher administered select subtests of the WAIS-IV and WJ-III. These scales were also counterbalanced to reduce the effects of possible confounds. For example, approximately half of the participants completed the WJ-III first and the others completed the WAIS-IV first. Finally, the participants (verbally) completed the Demographics and History Questionnaire, followed by a debriefing on the purpose and rationale of the study, before being paid for their time and co-operation.

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No-caution condition. The data for the no-caution condition was collected *post hoc* to obtain a baseline estimate of caution comprehension in a sample of offenders. Since one-third of the information contained in police cautions has been consistently comprehended by participants from various populations across studies, it was unclear whether the delivery of the cautions was adding to participants' knowledge of their legal rights (e.g., Eastwood et al., 2010). Therefore, a small sample of offenders completed the free recall and recognition tasks without hearing the police cautions. The procedure for this condition was very similar to that of the caution condition except the police cautions videos were not shown and the cognitive measures were not administered. A sufficient sample of offenders had been obtained to address the research questions and hypotheses regarding cognitive functioning, thus these measures were not included in the procedure for this condition. The *post-hoc* hypothesis was one not related to cognitive functioning, but rather the aim was to determine whether the delivery of the cautions was adding to offenders' knowledge of their legal rights.

Each individual in the no-caution condition participated in a 15-minute session at the JHS. The information letter was reviewed and informed consent was obtained. Participants were then asked to disclose what they knew regarding their legal rights in an arrest or detention situation and were prompted up to three times during this free recall task (see Free Recall Script in appendix C). Their verbal responses were recorded and later transcribed for coding. Next they were required to complete two alternate 13-item true-false tests regarding their legal rights. The participants in this condition were given both Forms A and B to allow for a reliability analysis of this measure of comprehension. Forms A and B were counterbalanced to mitigate the possibility of practice or fatigue

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effects. Finally, the participants completed a Demographic and History questionnaire, were debriefed regarding the purpose of the study, and were given \$10 for their time and co-operation.

Coding participant answers. Participants' answers were transcribed from the audio recordings into Microsoft Word documents. They were then coded using a coding guide constructed to measure participants' comprehension of the content of each caution (see appendix B). Scores for comprehension of the cautions could range from 0 to 4 for the right-to-silence, and 0 to 9 for the right-to-legal counsel, reflecting each of the components that underlie the required information. Each participant response was given a score out of 13 and the means were converted to percentages to indicate the amount of material comprehended.

The two 13-item tests of comprehension were developed based on the components of both the right-to-silence and right-to-legal counsel cautions as outlined in Table 2. These tests were scored out of 13 points and these scores were also converted to percentages. Participants needed to achieve a percentage score above 50% to demonstrate comprehension, given that the test presents them with a dichotomous forced choice, making it possible to achieve 50% by chance.

Interrater reliability. A coding guide (see appendix B) was developed based on *The Charter* and relevant case law pertaining to the delivery and purpose of police cautions (e.g., *R v. Bartle*, 1994; *R v. Brydges*, 1990; *R v. Herbert*, 1990). These responses were coded independently by the principal researcher and another coder to assess the agreement of the scoring. Each coder was provided with a coding guide and a one-hour training session that covered the practical aspects of coding the answers and the

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contents of the coding guide. The principal investigator coded all 60 transcripts, while the second coder examined 32% ($n = 19$) of the transcripts. The reliability of coding was measured using Cohen's Kappa (Cohen, 1960) and percentage agreement. The average kappa for the caution condition was .80 (91% agreement) suggesting excellent agreement between the coders. In the no-caution condition, the principal investigator and the second coder examined 100% ($n = 16$) of the transcripts and kappa was .93 (98% agreement). Again, this suggests excellent agreement between coders. See Table 1 containing the percentage agreement and kappa for each component of the police cautions for both groups, respectively.

Design and Analysis

To determine the level of police caution comprehension for each participant descriptive statistics were calculated. Multiple regressions and correlations were used to determine the extent to which offenders' comprehension levels could be explained by the predictor variables (i.e., three measures of cognitive abilities and number of years of education). Additional correlations were calculated to determine if there were relationships between education level, number of caution exposures, and level of police caution comprehension. The current research was primarily concerned with practical rather than statistical significance; as such, bivariate correlation coefficients (r) and regression coefficients (R^2) were used to assess the magnitude of the effects (Kirk, 1996).

Results

Caution Condition

Participants in the caution condition were able to comprehend on average 30% of the information contained within the police cautions, as measured by a free recall

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procedure. The mean number of components comprehended was 3.87 ($SD = 1.89$; range: 1-8). Seven participants (12%) recalled more than half ($> 54\%$) of the information contained within the cautions; while 53 participants (88%) recalled less than half ($< 46\%$). The maximum amount of information recalled was 62%, recalled by five (8%) participants. When examining the rights to silence and legal counsel cautions separately it seems that the right-to-silence is more understandable than the right-to-legal counsel. The average amount of material comprehended from the right-to-silence caution was 37% ($M = 1.48$, $SD = .93$, range: 0-4) as compared to 27% ($M = 2.40$, $SD = 1.44$, range: 0-9) of the right-to-legal counsel caution. This difference was statistically significant $t_{(59)} = 3.19$, $p = .002$, 95% $CI [3.87, 16.96]$.

When examining each of the 13 caution components (see Table 2) separately there are some components that were recalled more frequently than others. Figures 1 and 2 show the number of participants who correctly recalled each component for the right-to-silence and right-to-legal counsel caution, respectively. As can be seen in Figure 1, component 1a (*right-to-silence*) and 1d (*used as evidence*) were recalled by the majority of participants ($\geq 60\%$), while component 1b (*can't offer promises*) and 1c (*can't make threats*) were mentioned by few participants (i.e., $\leq 20\%$). As can be seen in Figure 2, only component 3a (*talk to duty counsel/legal aid*) was recalled by at least half of the participants (i.e., 50%), while five components were mentioned by less than a third of participants: 2d (*in private*), 3b (*accessed immediately*), 3c (*accessed for free*), 3d (*telephone number*), and 3e (*free telephone*).

As an alternative to the free recall task, a recognition task was also utilized to measure caution comprehension (i.e., true-false test). On average the participants

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demonstrated knowledge of 89.2% ($M = 11.6$, $SD = 1.37$, range: 8-13) of the material contained within the cautions. It is important to note, given the dichotomous nature of this test, that participants would have received 50% by chance alone. A one-sample t-test was used to compare this mean to what participants would have received by chance (i.e., 6.5) and it was found that the average comprehension value obtained was significantly different, $t_{(59)} = 65.69$, $p < .000$, 95% CI [11.25, 11.95]. None of the participants scored below chance levels, suggesting that they responded honestly; suboptimal effort would be indicated by scores below those that would be obtained by chance alone (Iverson & Franzen, 1994).

No-Caution Condition

The participants were able to recount approximately 15% ($M = 1.88$, $SD = 1.41$, range: 0-5) of the information regarding their legal rights contained in a police caution, without viewing the police caution videos. A similar trend was observed in this group as compared to the caution condition where participants appeared to report more information regarding the right-to-silence as compared to the right-to-legal counsel; however, this difference was not statistically significant, $t_{(15)} = 1.10$, $p = .29$, 95% CI [-5.89, 18.39]. Participants recalled 19% ($M = .75$, $SD = .78$, range: 0-2) of the information pertaining to the right-to-silence and 13% ($M = 1.13$, $SD = 1.15$, range: 0-4) of the information from the right-to-legal counsel. As can be seen in Figures 3 and 4, participants were able to convey more knowledge of certain components as compared to others. The pattern of information recalled was similar to the caution condition for the right-to-silence and right-to-legal counsel cautions.

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Participants in the no-caution condition completed both forms of the true-false test of comprehension and the scores were comparable to those obtained by participants in the caution condition. With regards to Form A, participants demonstrated knowledge of 85.1% ($M = 11.06$, $SD = 1.53$, range: 8-13) of the information contained within the police cautions. On Form B, participants recognized 86.5% of the information ($M = 11.25$, $SD = 1.53$, range: 10-13).

Cognitive Functioning, Education, and Caution Comprehension

Subtests of the WAIS-IV and the WJ-III were utilized to measure working memory, vocabulary knowledge, and listening comprehension. See Figures 5 to 7, which depict the distribution of scores for each of the measures of cognitive abilities. Table 3 also contains the distribution of scores for each of these three measures in terms of percentiles and qualitative labels. The mean scores obtained by participants on working memory fell in the below average range with a mean score of 7.13 ($SD = 2.83$, range: 1-14, $Mdn = 7$, mode = 6), which falls outside of the 8 to 12 range of average scores based on the normative sample. The mean score for vocabulary knowledge was 5.67 ($SD = 2.91$, range: 1-14, $Mdn = 6$, mode = 6), which again lies outside the average score range of 8 to 12 for the normative data. The average score on the measure of listening comprehension was 6.41 ($SD = 3.37$, range: 1-18, $Mdn = 5.9$, Mode = 7.8). This score reflects estimated grade level and therefore the average listening comprehension skills of the sample were approximately at the sixth grade level. This average estimated grade level is below what would be expected given that the sample had an average education level of approximately tenth grade (i.e., 11.3 to 11.5 years).

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The average number of years of education for both groups was approximately 11.3 ($SD = 2.74$) to 11.5 ($SD = 2.53$), which corresponds to an education level between grade 10 and 11, with a range from 7 years to 19 years. Number of years of education was found to have a significant positive relationship to caution comprehension. Moreover, the correlation coefficient between the free recall task and education was $r = .31$ ($p = .01$) and between the recognition task and education was $r = .27$ ($p = .03$). Years of education were also moderately positively correlated with the three measures of cognitive abilities (see Table 4).

To determine whether the independent variables (i.e., measures of cognitive abilities, number of years of education) could predict participants' performance on measures of police caution comprehension, standard multiple regression analyses were conducted. These predictor variables did not significantly predict variance within the caution comprehension scores as measured by free recall. The four predictor variables taken together were able to predict 11.5% of the variance in the caution comprehension scores, $R^2 = .115$, $F(4, 59) = 1.79$, $p = .144$, 95% $CI [-1.07, 3.65]$ (see Table 3). Small positive correlations were found between the free recall scores and each of the predictor variables: working memory ($r = .12$, $p = .132$), vocabulary ($r = .28$, $p = .031$), listening comprehension ($r = .22$, $p = .094$), and years of education ($r = .31$, $p = .014$).

Although not statistically significant, number of years of education made the strongest unique contribution to explaining free recall scores, $t_{(56)} = 1.40$, $p = .179$; 95% $CI [-.08, .42]$, when the variance explained by all other variables in the model were controlled for. This was followed by listening comprehension, $t_{(56)} = 1.36$, $p = .179$, 95% $CI [-.12, .22]$, and vocabulary, $t_{(56)} = .48$, $p = .639$, 95% $CI [-.19, .30]$, which make

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equally unique but not statistically significant contributions when other variables are controlled for. Finally, working memory, $t_{(56)} = -.02, p = .985, 95\% CI [-.22, .21]$, made the smallest unique contribution to explaining free recall comprehension scores.

A second standard multiple regression was carried out to determine how the predictor variables were able to account for variance when measuring comprehension using the recognition task. In this case the scores on measures of cognitive abilities and number of years of education were able to significantly account for 23.8% of the variance in recognition scores, $R^2 = .238, F(4, 56) = 4.29, p = .004, 95\% CI [8.33, 11.49]$ (see Table 5). Although these predictors are non-significant, listening comprehension uniquely explained the greatest amount of variance in recognition comprehension scores, $t_{(56)} = 1.89, p = .068, 95\% CI [-.01, .22]$, when the variance explained by all other variables in the model is controlled for. Next was working memory, $t_{(56)} = 1.36, p = .179, 95\% CI [-.05, .24]$, vocabulary ($t_{(56)} = .79, p = .436, 95\% CI [-.10, .23]$), and number of years of education ($t_{(56)} = -.05, p = .958, 95\% CI [-.17, .16]$).

Response Bias

Malingering analyses were conducted to determine if any of the participants exhibited response bias on the cognitive measures. The methods of detecting malingering were derived from subscales of the WAIS-IV (i.e., RDS and V-DS score); but each psychometric index has some limitations. Therefore, both were conducted to allow for comparison of the results from each measure and they will be discussed in turn.

The results indicated that seven participants could have exhibited response bias, based on the suggested cut-off for general population samples ($RDS \leq 6$). Although the

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RDS method has meta-analytic support demonstrating its ability to discriminate effectively between honest responders and simulated malingerers (Jasinski et al., 2011), the utility of this measure is reduced due to several limitations of this index as it is applied to the population sampled for this study. It is calculated from raw scores that have not been age-corrected. The sample is composed of individuals with a wide age range (19-74 years) and some of the abilities measured by this subtest decline naturally with age (Baltes & Lindenberger, 1997; Schneider, Daneman & Pichora-Fuller, 2002). Therefore, it is possible that age is confounding the results of this analysis.

In addition, the cutoff suggested in the literature is based on general population samples and may be problematic for this sample. RDS scores less than seven have been shown to be rare (< 4%) even in clinical populations (Iverson & Tulsky, 2003). We know that offender populations have more intellectual disability, mental illness, and substance use, all contributing to lower levels of cognitive functioning as compared to the general population, making it more likely that they would legitimately score in the atypical range. Given the risk of potentially excluding participants with unfeigned cognitive impairments, all results reported pertain to the sample as a whole (including those of participants identified as potential malingerers unless otherwise specified).

The second method of detecting possible malingerers was by calculating the V-DS score. If this score is greater than five it is possible that the participant is responding in a biased manner (Iverson & Tulsky, 2001). Four participants obtained V-DS scores greater than five and thus may have given suboptimal responses. None of these individuals were the same as the seven identified using the RDS method, therefore calling the reliability of these measures into question. While these scores are age-corrected, the

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limitation with this malingering index stems from the inclusion of the Vocabulary subtest as it is highly correlated with education (Groth-Marnat, 2009; see Table 6). This is problematic for use within offender populations who have lower levels of education attainment as compared to general population or normative samples. This confounding variable could have resulted in participants in the current study performing poorly on this subtest due to low level of education rather than to lack of effort or knowledge. This could have therefore led to an artificially inflated V-DS score, given that performance on Digit Span is not related to level of education achievement and would not have been similarly impacted.

When the participants suspected of suboptimal responses according to the RDS were excluded from the regression analyses, the proportion of variance accounted for by the four predictor variables increased and became statistically significant, as seen in the following equation (see Table 5), $R^2 = .19$, $F(4, 48) = 2.76$, $p = .038$, 95% *CI* [-1.82, 3.25]. Whereas, when the participants suspected of malingering based on V-DS difference were excluded from the regression analysis, the predictor variables accounted for 13.2% of the variance on free recall caution comprehension scores ($R^2 = .132$, $F(4, 55) = 1.94$, $p = .118$, 95% *CI* [-1.54, 3.49]; see Table 5). This result is more similar to that of the original regression analysis.

Given the differences between these two malingering indices, the inability of the measures to identify the same participants, the lack of appropriate cut-off scores, and the desire to maintain a sample with high external validity, the original regression analysis will remain the focus of the current study. Without further information regarding the

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reliability and validity of these two screens their utility within this study is unclear; however, they were included in an attempt to account for potential response bias.

Exposure to Police Cautions

To examine the relationship between caution comprehension and exposure to police cautions, participants were asked to indicate approximately how many times they had been read a police caution. Given that caution exposure information was gathered through self-report these results should be interpreted with caution. There was an outlier; a participant stated that he had 500 previous caution exposures, 400 more exposures than the next highest reported number (i.e., 100); this case was excluded from the current analysis and did not have any effect on the overall trend of these results. The mean number of caution exposures was 16.32 ($n = 59$, $SD = 20.90$) with a range from 0 to 100 and a median and mode of 10. The trend was similar in the no-caution group, with one outlier excluded (i.e., 1000 exposures) yielding an average of 18.86 caution exposures ($n = 15$, $SD = 27.28$, range: 1-100, $Mdn = 7.5$, Mode = 3). There was no significant relationship found between the number of previous exposures to a police caution and caution comprehension according to free recall ($r = -.07$, $p = .622$) or recognition measures ($r = -.12$, $p = .37$). However, small negative correlations were found between number of previous caution exposures and working memory ($r = -.26$, $p = .042$), listening comprehension ($r = -.25$, $p = .054$), and vocabulary ($r = -.21$, $p = .102$). Table 4 contains a correlation matrix outlining the relationships between measures of cognitive abilities, measures of caution comprehension, years of education, and number of exposures to police cautions.

Discussion

The primary purpose of the current research was to estimate the level of police caution comprehension in a sample of individuals who have been involved with the criminal justice system. A second objective was to determine if variations in the cognitive abilities of the individuals recalling the cautions could predict their performance on measures of police caution comprehension. The third objective was to compare comprehension levels using two alternate means of measuring understanding (i.e., recall and recognition). Finally, a forth and *post-hoc* objective was to determine how much the delivery of the police caution added to the participants' knowledge of their rights to silence and legal counsel.

Two of the four hypotheses were supported though this study. Firstly, participants demonstrated a poor understanding of their legal rights, which is consistent with previous research (see Eastwood et al., 2010; Fenner et al., 2002; Rogers, Harrison, Hazelwood et al., 2007). The prediction that participants should perform better on the recognition task as compared to the free recall task was also supported. Because these two measures are difficult to compare directly, this result should to be interpreted with caution. The hypothesis that the participants' cognitive abilities would be related to and able to predict performance on measures of caution comprehension was only partially supported, as cognitive ability only predicted a small amount of the variance in caution comprehension scores. Fourth, it was hypothesized that people generally have knowledge of about one-third of the information regardless of whether they were delivered a police caution or not. This hypothesis was not supported as participants in the no-caution group only recalled half as much information as those in the caution condition. The findings of the current

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research have the potential to improve the criminal justice system by ensuring the protection of the legal rights of Canadian citizens as outlined in *The Charter*.

Caution Comprehension

The findings showed that the participants have a very limited knowledge of their legal rights as contained within police cautions. None of the participants demonstrated complete understanding of the cautions, regardless of cognitive functioning. Furthermore, the finding that, on average, participants understood only a third of the material contained within the cautions is congruous with previous studies and across a variety of samples, including police officers, university students, high school students, the general public, and criminal defendants (see Clare et al., 1998; Eastwood et al., 2010; Eastwood & Snook, 2009; Fenner et al., 2002; Rogers, Harrison, Hazelwood, et al., 2007).

There seems to be a floor effect in understanding whereby the police cautions (and *Miranda*) are essentially incomprehensible. Participants, regardless of group membership (university students, offenders, general populations, juveniles), are demonstrating consistently low levels of comprehension (Eastwood et al., 2010; Fenner et al., 2002; Grisso, 1981). People generally comprehend one-third (30%) of the information about their legal rights. Given this pattern of results this author wondered if police cautions, as they are written currently, were adding anything to a persons' understanding of his or her legal rights. To test this *post-hoc* hypothesis and determine whether the actual delivery of the caution adds to an individual's knowledge of their legal rights, a second condition was added to the study subsequent to the first round of data collection. By comparing comprehension levels of those who heard the police caution and those who did not, it was possible to determine if the police caution was increasing the participants'

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knowledge of their rights to silence and legal counsel. When participants were asked to recall what they knew about their legal rights without having watched the police caution video, they demonstrated an understanding of approximately one-sixth (15%) of the information typically contained within a caution. Although comprehension was low in both groups, it seems the participants in the caution condition were able to recall more than those who did not receive the caution. Thus, the delivery of the police caution seems to be adding somewhat to an individual's knowledge of their legal rights, even if only slightly.

Past research into the complexity of police cautions found that the right-to-legal counsel cautions tend to be more complex than their right-to-silence counterparts (Eastwood et al., 2010; Helms, 2007). This trend was observed in the current study in terms of comprehensibility of each right, as the right-to-silence caution was found to be more understandable than the right-to-legal counsel caution in both conditions. The right-to-legal counsel caution is lengthier and contains more detail (i.e., 9 versus 4 components) than the right-to-silence and it may be more difficult for people to recall.

With regards to the information contained within each legal right, some caution components were recalled more frequently than others. This pattern has been seen in earlier research findings (see Grisso 1981). In the right-to-silence, the components stating that you do not need to say anything and that anything you say can be used in evidence were recalled frequently. An example of an infrequently recalled component from the right-to-silence was that the police are not allowed to threaten a suspect. With regards to the right-to-legal counsel, the segments outlining your right to talk to duty counsel/legal aid were recalled much more frequently than all other components. In contrast, the details

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that you can speak to your lawyer in private or speak to duty counsel for free were recalled very rarely. A possible explanation is that the poorly understood components are not contained within the *Miranda* warnings that are heard frequently on popular media, while the better-understood components are frequently mentioned in these contexts (e.g., right to remain silent, anything said will be held against you). Regardless of the reason for the lack of comprehension, it appears that more effort is needed to ensure that interviewees are fully aware of all their legal rights. It seems as if the participants have some broad working knowledge of their legal rights, but the details and particulars of these rights and how to invoke them are not being communicated by the current police cautions. Alternatively, these general statements are also the first statements in each of the police caution videos; therefore it is possible that there is a primacy effect (Matlin, 1998). This occurs when the participants can rehearse these early statements more than those that follow.

Participants also expressed substantial confusion surrounding whether police were allowed to threaten or offer benefits to detainees to persuade them to talk. On measures of recognition these components were frequently incorrectly identified as compared to items reflecting other components of the cautions. We know that Canadians' legal rights are not being upheld because they are delivered in an incomprehensible form, but police practices may also violate these rights if they are not respecting the suspects' rights not to speak. Although we cannot directly compare the recall and recognition methods of assessing comprehension as the forced-choice style of the true-false test inflates the results, it does seem that the participants are able to more easily recognize the details of their legal rights in this form (high percentage correctly identified). That is, participants

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were able to recognize more information from the police caution than they were able to freely recall. Alternatively, there is a possibility that they comprehend the information but cannot express it. The free recall measure could be impacted by expressive language ability. A correlation analysis indicated that there was not a strong relationship between the measures of recognition and recall. This finding suggests that participants may be able to more easily apply knowledge of their legal rights than they are able to verbally convey this same knowledge.

Furthermore, all participants first completed the free recall measure making it possible that this practice and rehearsal primed them to perform better on the second comprehension task – the recognition test. Participants may have also performed better here due to the lesser cognitive complexity of this task as compared to the free recall. Unlike the free recall measure where the participants in the no-caution group only recalled half as much of the information as those in the caution group, on the recognition task participants were able to recognize comparable amounts of information regardless of group membership. This pattern of results would suggest that the free recall measure did not prime participants for the recognition test and provide support for the explanation that the recognition task is less cognitively complex.

Experience with the Criminal Justice System. It is a common belief that people who are involved with the legal system have a working knowledge of their legal rights through their experience with the system (Brown, Ellis, & Larcombe, 1992). However, the results of the current study, in line with those from previous research (see Fenner et al., 2002; Grisso, 1981), found no relationship between number of exposures to police cautions and caution comprehension. This suggests that experience with the criminal

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justice system alone does not necessarily result in understanding of legal rights as was previously believed. Several possible explanations could account for this. The conditions under which suspects are read the police cautions may not be conducive to them being able to remember the information (e.g., intoxication, stress, length of time between repeated exposures). Therefore, repetition of the information may not be facilitating the learning or understanding of the material presented over successive trials. Additionally, the limited literacy, education, and intellectual functioning of this sample as whole may impede their ability to learn information even when it is presented repeatedly. Also, the police cautions are perceived as familiar by most individuals in conflict with the justice system; therefore it is possible that the individuals' receiving the caution are not focusing adequate attention to the passage due to their perceptions that it is familiar and that they already know the information being delivered. Another likely explanation for experience not leading to increased comprehension comes from the fact that most individuals state that they understand their rights although most do not (Fenner et al., 2002). As a result, police interviewers rarely verify understanding when delivering the cautions, and instead just recite them verbatim and proceed with the interview (see Snook et al. 2010). The lack of verification or feedback means that any misunderstandings or misconceptions are not identified and dealt with, and therefore offenders do not fully understand their rights despite substantial experience with the justice system.

Education. Number of years of education was found to be the best single predictor of caution comprehension and was also positively correlated with understanding police cautions. That is, education was able to uniquely explain the largest amount of variance in caution comprehension and an individual who reported higher levels of

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education also scored higher on measures of police caution comprehension than those who reported having lower levels of education. This suggests that educational achievement is associated with increased police caution comprehension and thus to a higher level of understanding of legal rights. These findings are consistent with past research on *Miranda* warnings (Rogers, Harrison, Hazelwood et al., 2007).

The finding that level of education was related to caution comprehension but experience with the justice system was not would suggest that university students should show higher levels of understanding, based on their higher level of educational attainment. However, the participants in the current study demonstrated a level of caution comprehension that was similar to that produced by a sample of university students who were tested under similar conditions (see Eastwood et al., 2010; Moore & Gagnier, 2008). This similarity in comprehension was somewhat surprising given the added barriers (e.g., below average cognitive functioning) that the offender population faces as compared to post-secondary students. Additionally, university students tend to have a higher level of education, which is highly positively correlated with IQ (Matarazzo & Herman, 1984). We also know that offender populations have been found to have lower levels of education (Harlow, 2003; Muirhead & Rhodes, 1998) and overall intelligence (Fenner et al., 2002; O'Connell et al., 2005) as compared to general population samples. Therefore, it seems reasonable to assume that on average university students have a higher level of intelligence as compared to average offenders. Previous studies on *Miranda* comprehension in samples of offenders that have directly compared offenders to non-offenders have found that these two groups differed on level of intelligence (higher in non-offenders) and experience with the criminal justice system (higher in offenders).

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While experience with the criminal justice system had no effect on their levels of caution comprehension, higher intelligence was related to increased comprehension (Grisso, 1981).

Despite these potential differences in cognitive functioning, the offenders in this study demonstrated comparable levels of understanding to university students on measures of police caution comprehension. These findings suggest that caution comprehension is dependent upon the actual passage or the delivery of the caution itself and not on abilities possessed by the individual receiving the caution. It may also be possible that there is some third variable (e.g., method of delivery, motivation, method of assessing comprehension) affecting this relationship, which may mediate or moderate the relationship between education and caution comprehension.

Given the above pattern of results, it seems that individuals are aware of the overarching concepts of their legal rights; however, the subtleties of the details of how and when to invoke these rights are not understood. This is a major problem facing the criminal justice system where people are confident in their comprehension and understanding of their rights to silence and legal counsel but fall short in knowing the details of how to utilize them in their best interest (see Cooke & Phillip, 1998; Eastwood & Snook, 2009; Fenner et al., 2002). When paired with the finding that participants who are not able to understand their rights are less willing to assert them this finding is particularly troubling (Abramovitch, Higgins-Biss, & Biss, 1993, 1995; Davis et al., 2011). Moreover, it appears that the offenders sampled for this study are currently incapable of making a knowing and intelligent waiver of their legal rights, based on the

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finding that none of the participants in this sample demonstrated complete understanding of the police cautions.

Cognitive Abilities and Caution Comprehension

The goal of this study was to determine if the person receiving the caution and his or her mental capacities' have a role in the comprehension of police cautions. The results suggest that cognitive abilities may not play as large a role in caution comprehension as was previously believed. This finding was unexpected considering past research and the vast cognitive differences between offender and general populations (see O'Connell et al., 2005). Offender populations in general have lower levels of intelligence, literacy, and education, as compared to the general population (Muirhead & Rhodes, 1998; O'Connell et al., 2005). Furthermore, they have higher levels of mental illness and substance use (Hodgins & Cote, 1990; Teplin, 1994), which could further impede their cognitive functioning (Fals-Stewart & Bates, 2003; Latvala et al., 2009; Rogers, Harrison, Hazelwood, et al., 2007). Despite these added barriers, levels of caution comprehension have been found to be very limited across all populations (e.g., Fenner et al., 2002).

The participants in the current study had cognitive abilities that were below average as compared to a Canadian normative population. The results found small positive correlations between caution comprehension and cognitive ability scores (i.e., $r < .3$). However, these factors were not able to account for a significant amount of variance in caution comprehension scores using a free recall procedure. The lack of predictive power of the cognitive scores in the present study is in direct contrast to previous research into caution comprehension and cognitive theory. Caution comprehension research has reported a strong relationship between the caution (and

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Miranda) comprehension and measures of general cognitive ability (Clare et al., 1998; Grisso, 1981) and specific abilities such as reading and listening comprehension (Rogers, Harrison, Hazelwood et al., 2007). Many other studies have suggested that cognitive factors such as working memory and verbal intelligence may be responsible for the poor caution comprehension seen across studies (e.g., Cooke and Phillip, 1998; Grisso, 1981). Additionally, there is a copious amount of literature outlining the cognitive abilities related to verbal passage comprehension (e.g., Caplan & Waters, 1999; Shohamy & Inbar, 1991). However, this relationship was not supported by the results of the current study. There are several possible explanations for these findings.

As outlined above, the measures of cognitive functioning accounted for less than 12 and 24% of the variance on the free recall and recognition tasks, respectively. This would indicate that it is not the person receiving the message that is the most problematic barrier to caution comprehension. Instead, this leaves the message and the method of delivery as the most likely variables causing disruptions in comprehension. However, there is also evidence to suggest that varying the characteristics of the message does not result in differences in level of comprehension (Eastwood et al., 2010). The speed of delivery has been also found to have a minimal effect on comprehension (MacDonald et al., 2010), while varying the method of delivery (written versus oral; see Eastwood & Snook, 2009; Grisso, 1981) and other listenability modifications (Eastwood & Snook, 2012) have been able to increase comprehension in sample of university students.

A potential confounding variable is response bias or malingering. It is defined as the intentional production of false or greatly exaggerated physical or psychological symptoms that are externally motivated (APA, 2000). Moreover, symptoms must be: 1)

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false or exaggerated, 2) intentional, and 3) motivated by external incentives (Tombaugh, 2004). In the current study, I addressed the first component of malingering by utilizing malingering screens derived from the scores on the WAIS-IV and the third component by removing any external incentives. Despite the efforts to account for this extraneous variable, it is possible that some participants could have been feigning impaired cognitive functioning or falsely assuming some other benefit of poor performance, thus skewing the results obtained on measures of cognitive functioning.

While the degree to which malingering could have impacted the results of this study are unknown, there are several reasons to believe that the participants in the current study were not malingering. Primarily, the results from each of the malingering screens were inconsistent. These tests identified eleven unique participants; the RDS identified seven individuals and the V-DS score identified four. No participant was identified as a potential malingerer on both screens. This inconsistency calls the validity and reliability of these measures into question, despite the empirical literature supporting their psychometric properties (Jasinski et al., 2011; Larrabee, 2007). Second, there was no external incentive to malingering. The participants were provided a small cash incentive for participating in the study, however, as per the Canadian Psychological Association (CPA) Code of Ethics (CPA, 2000) and the Tri-Counsel Policy Statement: Ethical Conduct for research involving Humans, the participants were informed that they would receive this incentive regardless of performance and it was not dependent on the completion of the research session. Additionally, their participation was anonymous and they were aware that the information they provided regarding their age, gender, and ethnicity would be separated from the experimental data thus precluding the use of this information (i.e.,

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demographic profile cannot be linked to study results) for use in any ongoing legal proceedings. This served to remove any legal motivation to malingering. Thirdly, the overall cognitive profiles of this sample demonstrated below average cognitive functioning and this is consistent with previous research on the cognitive functioning of offender populations (O'Connell et al., 2005; Fenner et al., 2002). Finally, although an informal observation, each of the participants was co-operative and appeared to be fully engaged throughout each of their respective research sessions.

One of the goals of the current study was to obtain results with external validity and to sample the offenders without making any unnecessary exclusion. Currently, there is no literature suggesting what cut-off scores on RDS or V-DS may be appropriate for this population given their potential cognitive limitations. The one study that utilized these methods with a population of federal inmates excluded participants with a history of head injury, major psychiatric disorder, substance use, or any other factors that may have had a detrimental impact on their cognitive abilities (Iverson & Franzen, 1994). It is known that all of these issues are more prevalent in offender populations, thus excluding these individuals may have rendered this sample comparable, cognitively, to a general population sample. These cutoff scores are based on a population with a normal distribution of scores, which is not consistent with the distribution of cognitive functioning scores of offender populations who are sampled inclusively.

The most likely explanation for lack of predictive power of the measures of cognitive functioning is the limited variance produced by the participants on measures of police caution comprehension. Given the strength of the evidence emanating from past research concerning the role of cognitive abilities in caution comprehension (see Cooke

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& Phillip, 1998; Fenner et al., 2002; Fulero & Everington, 1995; Grisso, 1981; Rogers, Harrison, Hazelwood et al., 2007), it is possible that the scores on measures of cognitive ability were not able to account for a large portion of variance in caution comprehension due to the limited amount of variance in these scores. The restricted range of scores seen in both the free recall (range: 1 - 8) and recognition (range: 8 - 13) tasks limits the predictive ability of the measures of cognitive functioning. If alterations are made to the delivery of the police caution that increase comprehension, these cognitive factors may become useful for explaining differences in levels of participants' understanding of police cautions.

Furthermore, considering the finding that education is related to caution comprehension, it would seem reasonable to believe that university students, who have better developed intellectual abilities and higher levels of education as compared to offenders, would demonstrate improved understanding of the cautions. However, across studies university students and offender populations have been found to have comparable levels of comprehension (see Eastwood et al., 2010). This is suggestive of a floor effect and demonstrates the importance of improving police caution comprehensibility. It seems the limited range of police caution comprehension of these samples is hindering the investigation of explanatory factors related to understanding police cautions.

Practical Implications

The current content and method of delivery of police cautions seems to serve solely a legal purpose. The language used in police cautions consists mainly of legal terminology (Helms, 2003; 2007) and the purpose of legal language is not to communicate information but rather to record information for archival functions and

potential review by other legal experts (Jackson, 1995). The method in which police cautions are currently delivered and an individuals' comprehension affirmed (e.g., Do you understand?) serves the goal of documenting that the person was informed and that they stated they understood for legal purposes rather than practical ones (Jackson, 1995). This is evident in the wording and delivery of the cautions currently being used in Canada and the United States (see Eastwood et al., 2010; Kassin et al., 2007; Rogers, Harrison, Shuman et al., 2007; Snook et al., 2010).

The accumulation of research on police cautions would suggest that the incomprehensibility of these passages is a major problem within the criminal justice system. It has been consistently demonstrated that asking people "Do you understand?" and eliciting a yes/no response is not an effective way of determining comprehension because nearly everyone answers in the affirmative (see Fenner et al., 2002). There is a need to verify understanding more carefully. Based on the available literature, there are a number of suggestions for police interviewers to facilitate comprehension of police cautions and reduce the risk of statements being ruled inadmissible due to violations of *Charter* rights. Firstly, go beyond the simple recitation of police cautions and present the caution in written format (in addition to the verbal delivery) or in the case of illiterate or intellectually disabled individuals have a third party present (e.g., guardian or other adult) to assist in comprehension. Secondly, modify the delivery of the cautions to include some further explanation or paraphrasing of the components. Thirdly, ask suspects to explain in their own words the meaning of the cautions to assess their level of comprehension prior to beginning the interrogation and to reiterate or explain any segments that they have not understood.

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Building on previous research, the current study has demonstrated that it is not only vulnerable populations within the criminal justice system who do not understand their legal rights. It was previously believed that individuals who are of a young age, intellectually disabled, or intoxicated might not understand their legal rights (Grisso, 1981). However, as the findings from the current study suggest, miscarriages of justice are not only occurring with vulnerable populations in the justice system, but may be occurring to the majority of individuals involved with the justice system regardless of experience, education, or intellectual ability.

Some researchers have suggested that the solution to this problem is to determine the complexity of each caution as measured by the grade-level required to understand it, and then evaluate each detainees' achievement/intelligence level to determine if he or she is capable of understanding the warning (e.g., Helms, 2007). This solution, in addition to being time consuming and expensive, is unlikely to be effective given the results of this and other recent research. Relying on cognitive measures alone will not allow for identification of those who may have difficulty understanding their rights to silence and legal counsel.

The findings from the current study demonstrate the severity of the problem of caution incomprehensibility for individuals involved with the criminal justice system. Consequences for individuals who fail to understand police cautions include: violations of their *Charter* rights, increased difficulty making informed decisions about interrogation proceedings, and unreliable statements or false confessions. Police officers are also affected by this lack of comprehension. If it is found that a suspect did not

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understand his or her legal rights at the time of the interview, the court might rule the inculpatory evidence gathered during the interview inadmissible (Marin, 2004).

In considering the evidence available in the current literature on police caution (and *Miranda*) comprehension, it appears that the majority of people do not understand their legal rights. This lack of comprehension of legal right may be resulting in numerous miscarriages of justice, where the provision of police cautions fails to protect people and evidence is admitted into the courts despite the suspect's uninformed decision to waive his or her rights. Ultimately, the safeguards put in place within the justice system are not fulfilling their intended purpose.

This problem is at the level of police organizations as well as other areas of the justice system. In order for information gathered from an individual during an investigation to be admissible in court the police must demonstrate that the individual was informed of their legal rights and that they understood them. Currently, the courts have been satisfied with the method of delivery and documenting understanding. Given the overwhelming literature now available to demonstrate that the majority of people do not actually understand their rights, despite stating they do, and a large proportion choosing to waive their rights, it seems the courts may need to utilize different methods to evaluate the validity of waivers and establish criteria to evaluate police caution comprehension (see Fenner et al., 2002; Snook et al., 2010).

Future Research

There are many directions that future research could take to build on the current body of literature pertaining to police caution comprehension. Past research has demonstrated that presenting the cautions in written format increases comprehension,

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perhaps because it provides individuals with a chance to review the information more than once (e.g., Eastwood & Snook, 2009). This increased level of comprehension has been demonstrated in university students (Eastwood & Snook, 2009), as well as offenders (Grisso, 1981). Thus far, the overall level of comprehension has increased from a third of the material to approximately half of the material contained within the caution when presented in written format. It seems that providing the caution in written format while continuing to explore other ways of increasing the comprehensibility of the passage is the most promising direction for future exploration of this issue. Researchers have found that altering the administration of the caution (e.g., adding in paraphrased explanations or listing components) was also able to increase the comprehensibility of the caution in a university student sample (see Eastwood & Snook, 2012). To determine if these same improvements in comprehensibility found in university students are generalizable to offender populations a replication of this research integrating listenability modifications (e.g., explanations or listing) to police caution delivery would be useful.

Individuals frequently state that they have understood their rights, despite their level of actual understanding (Fenner et al., 2002). Exploring new procedures for assessing comprehension/understanding of the cautions could then be built into the delivery of the caution for use by officers and would be a useful direction for future research. As stated above, requiring the individual to paraphrase the caution in their own words, asking questions pertaining to certain aspects of the caution, or using vignettes, would all be potential options for ensuring understanding, and would likely provide a more valid method of assessing understanding. Continued research in this area may

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increase the accountability of police organizations in informing individuals of their rights and confirming their comprehension before proceeding with their investigation.

With regards to malingering or response bias, to determine whether those in the current sample were malingering or displaying impairments in cognitive functioning, it would be necessary to conduct a criterion validation study. This would involve sampling the general population where the cut-off scores are more appropriate, and re-conducting the current study with the addition of a dedicated malingering measure (e.g., Test of Memory Malingering), allowing for comparison to the results of the malingering screens from the WAIS-IV.

Another possibility for future research would be to develop appropriate cut-off scores for the RDS and V-DS difference based on normative data from offender populations, by including more extensive neuropsychological test batteries and formal measures of malingering. We know approximately twice the number of people in the correctional and justice systems experience intellectual disability as compared to the general population. In the current study it was difficult to discern if the participants received these low scores due to low levels of cognitive functioning or because they were feigning cognitive impairment.

Although the results of this study are inconclusive regarding the role of cognitive abilities in understanding legal rights, they redirect our focus to systemic variables and their role in caution comprehension. Certain variables such as cognitive functioning, background of the individual receiving the caution, and the anxiety inherent in an interrogation situation cannot be modified. By contrast, some systemic variables of the criminal justice system, such as method of caution delivery and the content of the

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message, can be manipulated to enhance understanding. Once a higher level of understanding has been demonstrated in a general population, the current study should be replicated to better determine how much variance in these modified police caution scores is accounted for by certain cognitive abilities. Mental illness and substance use may also present an additional barrier to caution comprehension above and beyond their impact on cognitive functioning. Therefore, another potential direction for future research would be to examine the unique influence of mental illness and drug use on caution comprehension. This information would serve to assist in explaining why individuals do not understand police cautions as they are currently delivered. At present, we are unsure what role cognitive abilities may play in caution comprehension and it seems that method of delivery may be the most effective point of intervention to increase understanding and can be easily implemented across police organizations.

Limitations

There are several limitations to the current study. Primarily, this study's design is non-experimental. Therefore, no causal conclusions can be drawn from these results. The correlational design of this study limits interpretation of the results to relationships between variables without being able to rule out all possible confounding variables. However, this study was designed to achieve a high level of external validity. This ensured that the results were generalizable to individuals involved with the criminal justice system, and can therefore be applied practically to ameliorate the present situation of poor comprehension of legal rights in this population.

The study consisted of two conditions: the caution ($n = 60$) and a *post-hoc* no-caution condition ($n = 16$) and, as can be seen, the comparison group was much smaller

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than the original sample. The no-caution condition allowed for the manipulation of an independent variable (i.e., police caution videos). The delivery method (i.e., written versus oral) of the police caution was not manipulated in this design and this is a limitation of the current study. Examining the differences in comprehension across two types of delivery may have resulted in more variance in the caution comprehension scores, which could have provided more information concerning the relationships between cognitive functioning and caution comprehension. However, it was unclear at the outset how many participants would be available to comprise the sample. Specifically, it was not known if a sufficient number of participants would have been available to have adequate numbers across multiple groups or conditions.

A further limitation includes the participants self-selecting into the study. This could be problematic given the lack of information regarding any potential differences between those individuals who chose to participate in the study versus those who did not. There could be differences in cognitive functioning, educational achievement, age, gender, ethnicity, experience with the criminal justice system, or knowledge of legal rights. A random sample of participants and random assignment into groups would have yielded a truer estimate of this populations' knowledge of their legal rights.

The demographic information was separated from the experimental data (for legal reasons), thus precluding any analysis of differences in performance based on age, gender, or ethnicity, this is a limitation of the current study. There was very limited diversity in the sample across gender and ethnicity, which would have limited the utility of these comparisons. However, it would have been useful to examine how age may have been related to caution comprehension. The scores on the WAIS-IV are corrected for age

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and thus would control for age differences in scores on the cognitive measures. Some variability in these factors (especially gender and ethnicity) were not accounted or controlled for and they could have affected caution comprehension or cognitive functioning scores. This included but was not limited to English language proficiency level, decline in cognitive functioning with age, or cultural differences.

With regards to limitations of the measures utilized within the study, there are several potential weaknesses. The fact that participants did not report certain aspects of the cautions does not guarantee that they did not comprehend them. The free recall task is often criticized as a measure of understanding because it is confounded with verbal and memory abilities (Grisso, 1981) and the meaning of a verbal passage transcends the sum of the meanings of each word individually (Miller, 1956). It was included here to ensure consistency with previous research on caution comprehension. Additionally, it is a method of testing comprehension that does not re-introduce any information to the participant. Given the limitations of the free recall measure, alternate measures of comprehension were utilized in the current study.

Although the overall percentage agreement for the inter-rater coding was excellent (i.e., 91%), there were two components where agreement was lower (i.e., 1a and 3a; ~70%) – which is likely a result of trying to interpret often fragmentary and non-linear responses from participants. However, attempts were made to be liberal with the final coding (i.e., give credit for component if there was any evidence that it was understood), and given that there was 95% or better agreement on the majority of components, it is unlikely that these components impacted the overall conclusions of the study substantially.

All measures in this study were counterbalanced except for the police caution comprehension measures (i.e., the free recall was completed first followed by the recognition task). The recognition task re-introduces information from the caution videos to the participant and this could have invalidated the free recall responses. The ordering of the police caution comprehension measures may have resulted in practice or fatigue effects on the true-false test of comprehension.

Finally, although the WAIS-IV is the gold standard of measures of intellectual ability and the Digit Span subtest is frequently utilized as a measure of working memory, it does have limitations. This subtest measures working memory but also relies on the participants' attention and concentration abilities (Groth-Marnat, 2009; Wechsler, 2008a), presenting two potentially confounding variables affecting the results obtained from this subtest. The digit span backward, a component of the Digit Span subtest is a purer measure of working memory and using just that part of the test may have controlled for the potential extraneous variables outlined above.

Concluding Thoughts

The primary goal of the current study was to determine the level of police caution comprehension in a sample of Canadian offenders. It provides further evidence to support the problem of lack of comprehensibility of police cautions in Canada, the importance of continuing to design more understandable cautions, explore methods of delivery, and ways to assess suspects' comprehension. Laboratory-based research with university student samples has suggested consistently that Canadian police cautions are difficult to comprehend (e.g., Eastwood et al., 2010; Moore & Gagnier, 2008). However, this study opens up the possibility that a similar problem exists with Canadian offenders, and that

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they likely remain unprotected in interview situations (assuming the rights are merely recited off a police caution card like they were in this study; see Snook et al., 2010). In addition, it is likely that many of the instances where rights are waived were invalid because individuals simply did not understand their rights, and according to case law, the resulting statements could be ruled inadmissible in court (Marin, 2004).

Overall, the results suggest that Canadians facing a police interrogation are unable to knowingly and voluntarily exercise or waive their rights. However, the reasons behind these low levels of comprehension are still largely unknown. The consequences of utilizing a police caution that is incomprehensible to the majority of individuals who are in contact with the justice system are too severe to ignore. Given the importance of increased comprehension to both suspects' and police organizations, future research is needed to explore the reasons for the incomprehensibility of police cautions. Findings of such research should be used to make appropriate changes to police cautions within the criminal justice system.

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Table 1

Interrater Reliability: Cohen's Kappa and Percentage Agreement for Each Caution Component.

Caution Component	Percentage Agreement (Cohen's Kappa)	
	Caution Condition	No Caution Condition
1a	68% (.42)	95% (.88)
1b	95%*	100% (1)
1c	100% (1)	100% (1)
1d	100% (1)	100% (1)
2a	84% (.68)	84% (.58)
2b	95% (.89)	100% (1)
2c	79% (.57)	100% (1)
2d	100% (1)	100% (1)
3a	68% (.17)	95% (.64)
3b	95% (.64)	100% (1)
3c	100% (1)	100% (1)
3d	100% (1)	100% (1)
3e	95% (.83)	98% (.93)

Note. *Kappa could not be calculated, as one coder did not code any participants as recalling this component.

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Table 2

Police Caution Components

Label	Caution Component
1a	You do not have to say anything unless you wish to do so
1b	You have nothing to hope from any promise of favor
1c	Nothing to fear from any threat whether or not you say anything.
1d	Anything you say may be used as evidence.
2a	You can hire a lawyer
2b	You can talk to a lawyer
2c	You can talk to or hire a lawyer right now
2d	You can talk to a lawyer in private
3a	You can talk to a government lawyer
3b	You can get legal advice before you answer any question
3c	You can talk to a lawyer for free
3d	You can have a telephone number to call to get legal service
3e	A telephone is available to you to call this legal service

Note. Caution component labels correspond to the three major elements contained within the police caution and the details pertaining to those.

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Table 3

Summary of the number of participants scoring in each cognitive ability range by qualitative label and percentile.

Cognitive Ability	Qualitative Label (Percentile)	Number of Participants (%)
Working Memory	Far Below Average (< 2 nd)	9 (15%)
	Below Average (< 16 th)	25(42%)
	Average (< 75 th)	23 (38%)
	Above Average (< 99 th)	3 (5%)
Vocabulary	Far Below Average (< 2 nd)	22 (37%)
	Below Average (< 16 th)	23 (38%)
	Average (< 75 th)	14 (23%)
	Above Average (< 99 th)	1 (2%)
Listening Comprehension	Elementary School (Grade 1-6)	31 (52%)
	Junior High School (Grade 7-9)	20 (33%)
	High School (Grade 10-12)	7 (12%)
	Post-Secondary (e.g., College University)	2 (3%)

Note. Percentiles allow for comparisons to the normative sample, they indicate the

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percentage of same-aged peers the participant preformed better than.

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Table 4

Summary of Multiple Regression Analysis for Variables Predicting Caution Comprehension (N = 60)

Variable	Free Recall			Recognition		
	B	SE B	β	B	SE B	β
Working Memory	-.002	.106	-.003	.097	.071	.201
Listening Comprehension	.050	.086	.089	.107	.058	.264
Vocabulary	.058	.122	.089	.065	.082	.137
Years of Education	.170	.125	.228	-.004	.084	-.008

Note. β = estimated values of raw (un-standardized) regression coefficients; SE β = Standard error of estimated values of raw regression coefficients; β = Beta (1- β reflecting the probability of making a type II error).

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Table 5

Pearson Product-Moment Correlations between Measures of Cognitive Abilities, Years of Education, Police Caution Comprehension, and Number of Exposures to Police Cautions

Variable	Working Memory	Vocabulary	Listening Comprehension	Free Recall	Recognition	Years of Education	Caution Exposures
Working Memory	1	.557*	.441*	.117	.382	.498*	-.263
Vocabulary		1	.545*	.278	.388*	.627*	-.213
Listening Comprehension			1	.218	.418*	.363	-.250
Caution Comprehension (Free Recall)				1	.182	.314	.120
Caution Comprehension (Recognition)					1	.274	-.092
Years of Education						1	-.107
Caution Exposures							1

Note. * = Statistical significance at the $p < 0.05$ level.

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Table 6

Summary of Multiple Regression Analysis for Variables Predicting Caution Comprehension with Participants suspected of Response Bias Removed

Variable	RDS ($n = 52$)		V-DS ($n = 55$)			
	B	SE B	B	B	SE B	β
Working Memory	.079	.117	.099	-.011	.137	-.015
Listening Comprehension	.134	.086	.226	.049	.089	.089
Vocabulary	.093	.118	.138	.056	.138	.086
Years of Education	.084	.125	.112	.202	.133	.264

Note. β = estimated values of raw (unstandardized) regression coefficients;
 SE B = Standard error of estimated values of raw regression coefficients;
 β = Beta ($1 - \beta$ reflecting the probability of making a type II error).

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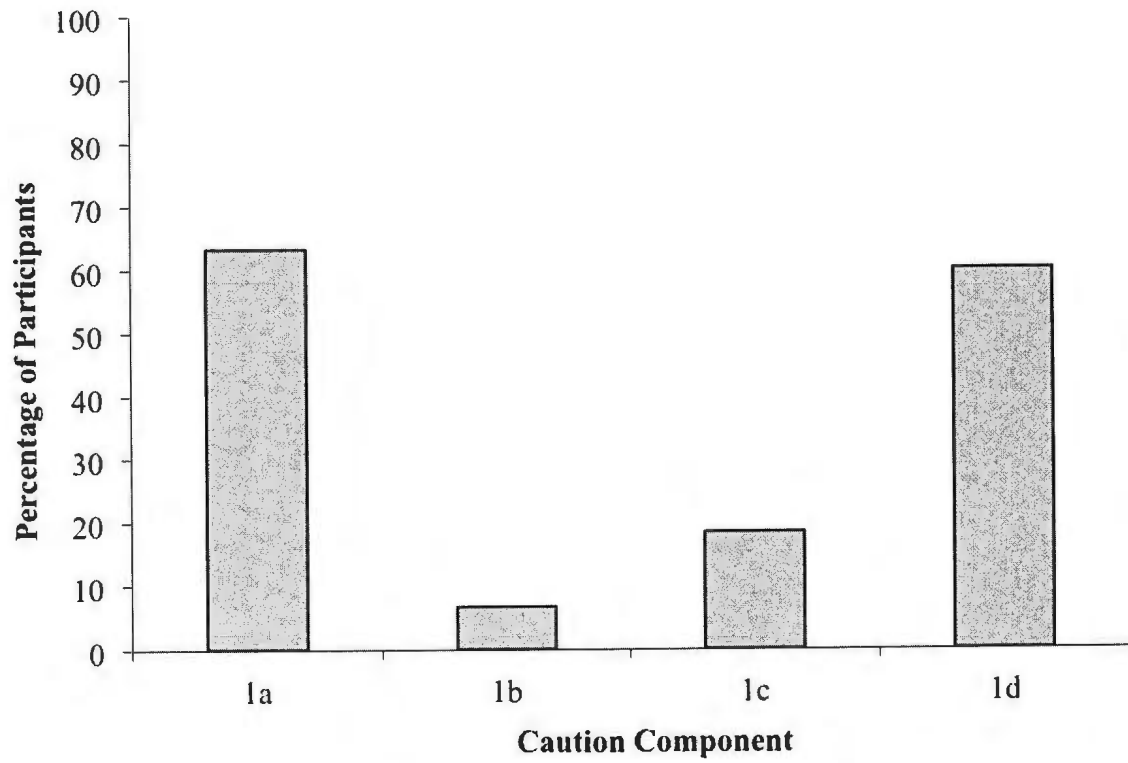


Figure 1. Percentage of Participants in the Caution Condition Who Correctly Recalled the Four Components of the Right-to-Silence Caution.

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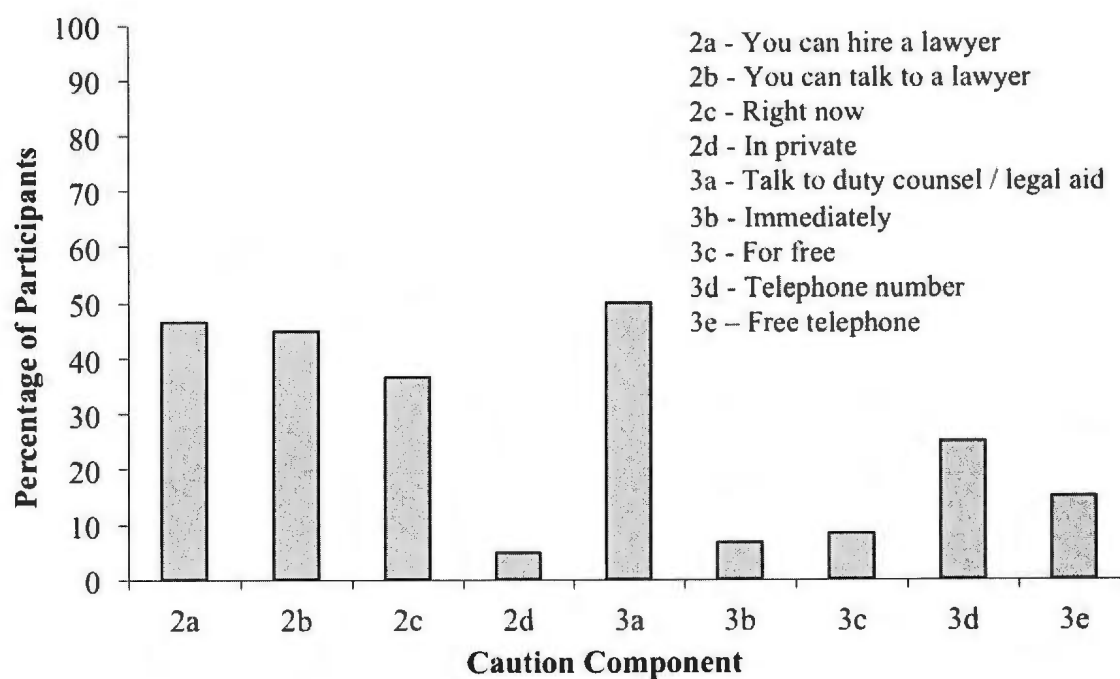


Figure 2. Percentage of Participants in the Caution Condition Who Correctly Recalled Each of the Nine Components of the Right-to-Legal Counsel Caution.

MEASURING POLICE CAUTION COMPREHENSION

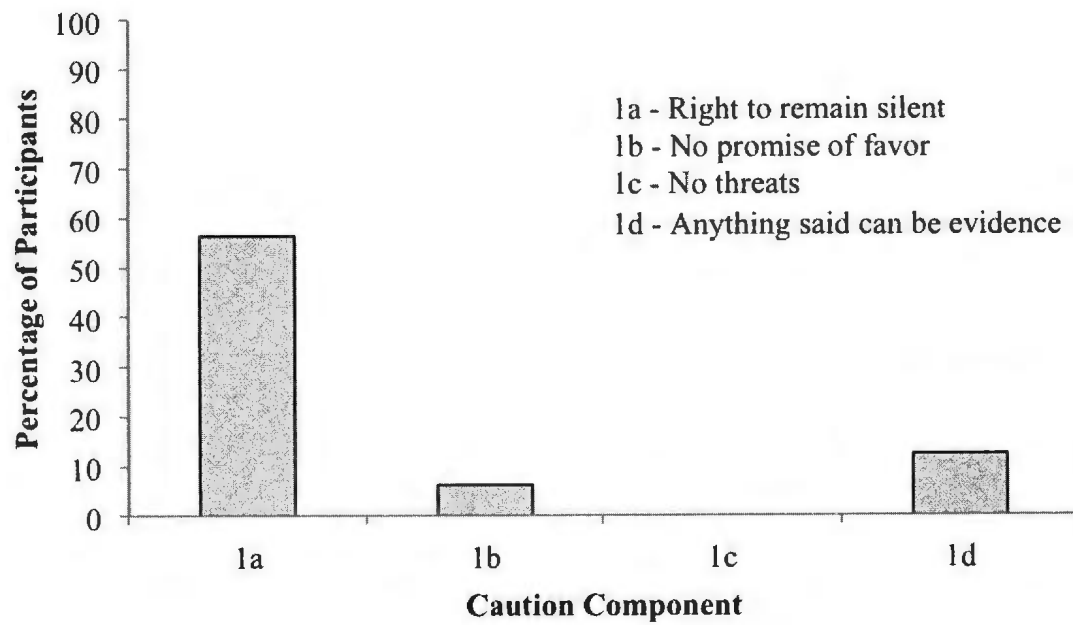


Figure 3. Percentage of Participants in the No-Caution Condition Who Correctly Recalled the Four Components of the Right-to-Silence Caution.

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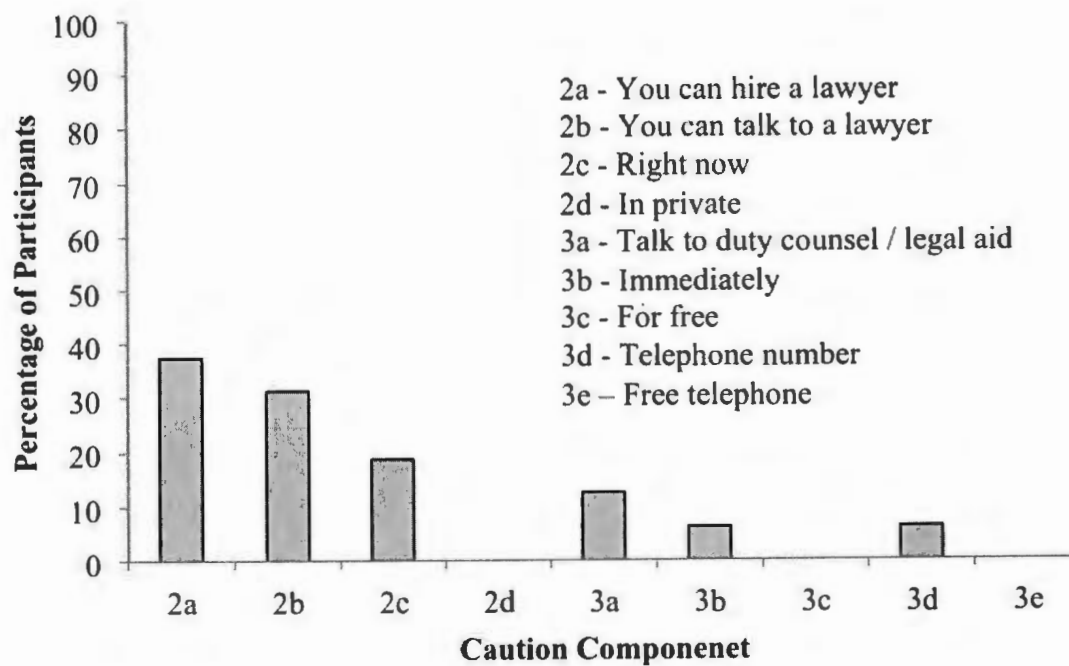


Figure 4. Percentage of Participants in the No-Caution Condition Who Correctly Recalled Each of the Nine Components of the Right-to-Legal Counsel Caution.

MEASURING POLICE CAUTION COMPREHENSION

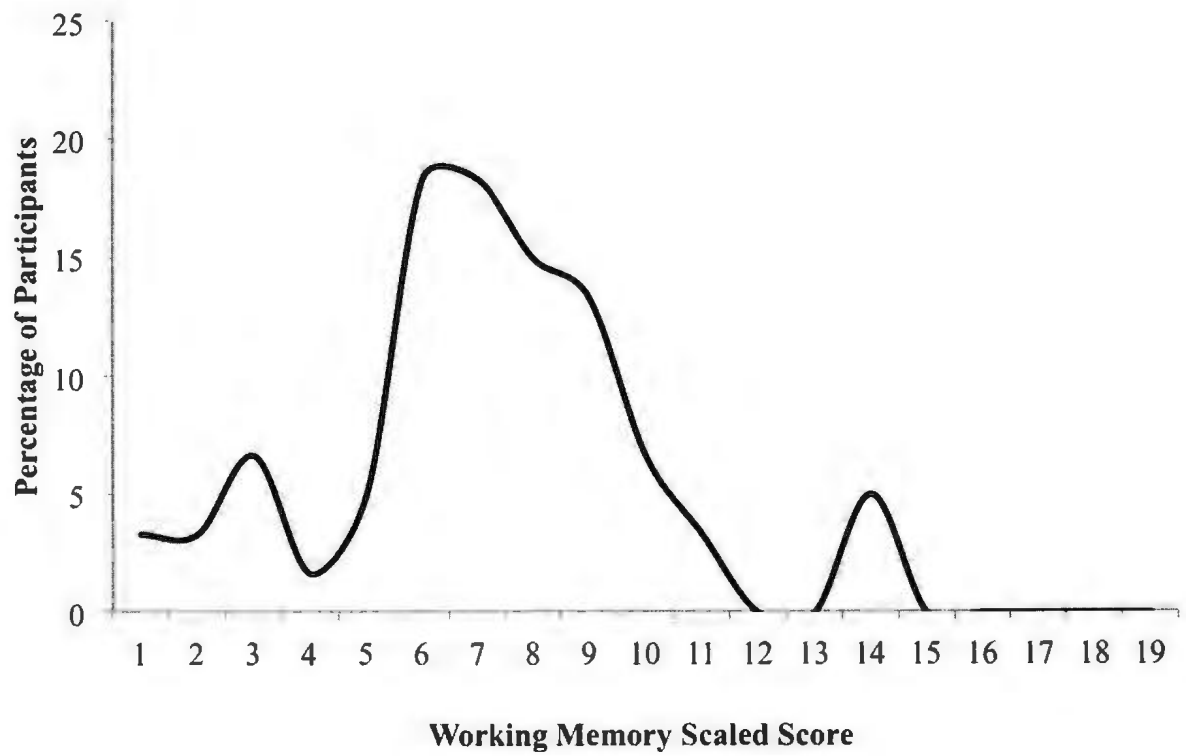


Figure 5. Distribution of Age-Corrected Working Memory Scaled Scores by Percentage of Participants.

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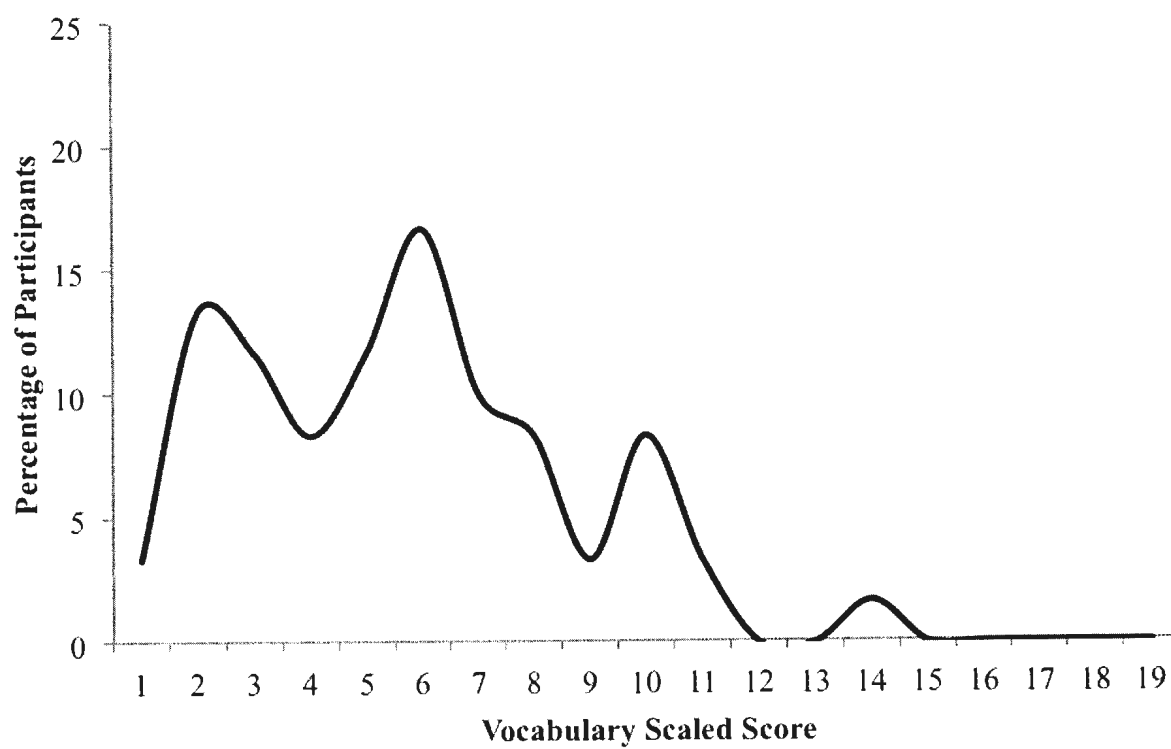


Figure 6. Distribution of Age-Corrected Vocabulary Scaled Score by Percentage of Participants.

MEASURING POLICE CAUTION COMPREHENSION

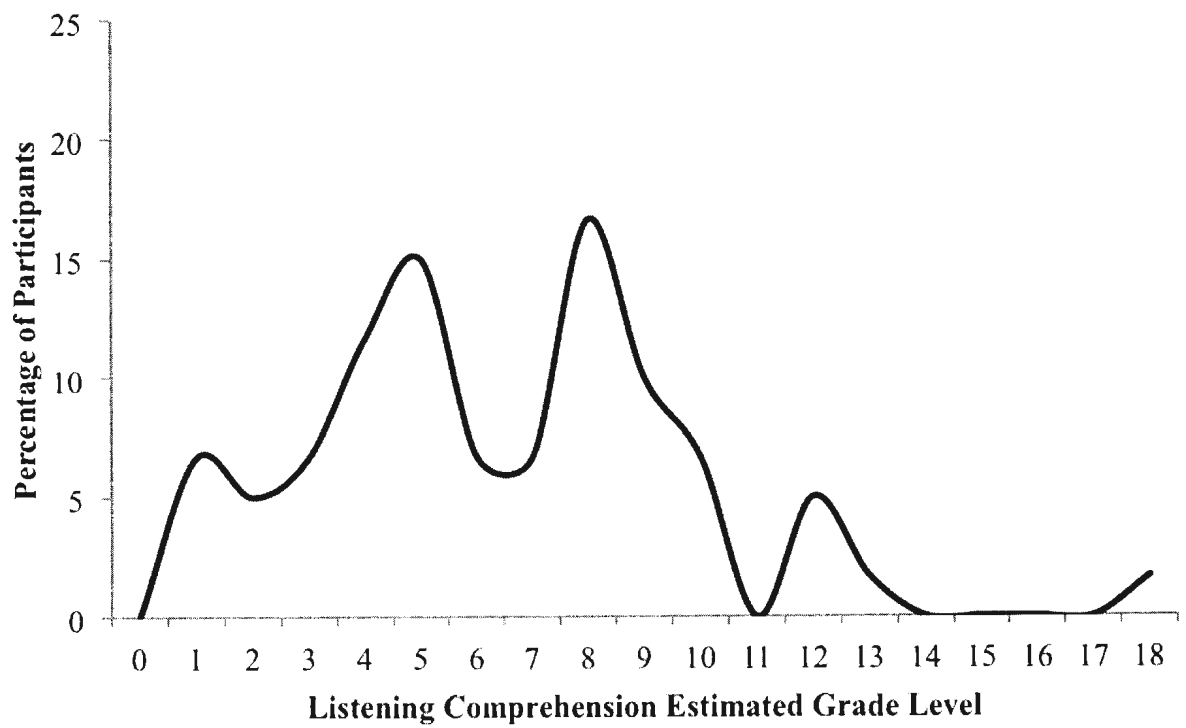


Figure 7. Distribution of Listening Comprehension Estimated Grade Level Scores by Percentage of Participants.

Appendix A

Caution Condition Materials

MEASURING POLICE CAUTION COMPREHENSION

Willingness to Participate

This research is being done through the Department of Psychology at Memorial University. This is a student research project being done with Dr. Brent Snook. It is about how people understand their legal rights. We would like to invite you to take part in this study. It will take about 1 hour of your time.

You will be volunteering to take part in this study. So, you can end the session at anytime without any penalty to you. You will be given \$10 for taking part in this research. Your name will not be attached to any part of the study, and all your answers will be kept private. no individual tests results will be given. Also, no individual tests results will be given to the John Howard Society or Corrections and Community Services.

If you choose to take part, you will watch a short video and then explain what you understand from the video. This explanation will be audio recorded. You can ask the researcher to turn off the recorder at any time. You will also be asked your age, gender, and ethnicity, to do some true or false questions, a questionnaire, and some mental tasks. If you do not want to answer a question you do not have to.

For questions about this study please contact Dr. Brent Snook (Department of Psychology, Memorial University) at bsnook@play.psych.mun.ca or by telephone at 709-737-3101. The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-737-2861.

If you want to take part in this study, please make an appointment with the staff at the John Howard Society or Probation Services.

Sincerely,

Sarah J Chaulk, PsyD Candidate
Principal Researcher
Department of Psychology
Memorial University
sarah.chaulk@mun.ca

Brent Snook, PhD
Associate Professor
Department of Psychology
Memorial University

MEASURING POLICE CAUTION COMPREHENSION

Information Letter

This study is being done through the Department of Psychology at Memorial University. It is about how people understand their legal rights. It will take about 1 hour of your time.

You can chose whether or not you take part in this study. If you choose to take part you will watch a short video and then explain what you understand from the video. This answer will be audio recorded. You can ask the researcher to turn off the recorder at any time. You will also be asked your age, sex, and race, to do some true or false questions, a questionnaire, and some mental tasks. If you do not want to answer a question you do not have to.

You are choosing to take part in this study. So, you can end the session anytime without any penalty to you. Your name will not be part of the study. All your responses will be kept private. no individual tests results will be given. Also, no individual test results will be given to the John Howard Society or Corrections and Community Services.

Your personal information will be kept in a computer file separate from all other information. You can use a fake name in the session. This way personal information cannot be connected to the results from testing. All paper work will be stored in a locker at Memorial University. It will be destroyed about five years after the study is finished.

If you have any questions or concerns about the study, please ask the researcher. For other questions about this study please contact Dr. Brent Snook, Department of Psychology, Memorial University, at bsnook@play.psych.mun.ca or by telephone at 709-737-3101.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-737-2861.

Sincerely,

Sarah J Chaulk, PsyD Candidate
Principal Researcher
Department of Psychology
Memorial University
sarah.chaulk@mun.ca

Brent Snook, PhD
Associate Professor
Department of Psychology
Memorial University

MEASURING POLICE CAUTION COMPREHENSION

Consent Form

Verbal Script

Has the information letter been explained to you?

Have you been told how to get more information about the study?

Do you understand that you can end the session anytime without any penalty to you?

Do you agree to have some of your responses (explanation of the police caution) audio recorded?

Do you have any questions about the study?

Do you have any question about your part in the study?

Have all of your questions been answered?

Do you understand what you are expected to do?

Do you agree to participate in this study?

For questions or concerns about this study please contact Dr. Brent Snook (Department of Psychology, Memorial University) at bsnook@play.psych.mun.ca or by telephone at 737-3101. The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-737-2861.

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Demographic Information Sheet

We would appreciate your responses to the next few questions, which will be used solely for demographic purposes. All responses will be anonymous. none of these responses will be associated with you name or pseudonym. Please check responses to the following questions.

1. Please indicate your gender: ☐ Female ☐ Male

2. What is your age? _____

3. Please indicate your ethnicity?

☐ Caucasian (White) ☐ African-American

☐ Asian ☐ Hispanic

☐ Aboriginal

☐ Other (please specify)_____

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History Questionnaire

All responses will be anonymous and confidential.

1. Approximately how many times has a police officer read you a police caution (i.e. right-to-silence, right-to-legal-counsel)? _____

2. Have you been convicted of a crime in the past? Y N

3. Have you been incarcerated in the past? Y N

4. Please indicate your highest level of education?

☐ Elementary grades (4-6)

☐ Junior High School

☐ High School

☐ University Degree

☐ College Diploma
specify) _____

☐ Other (please

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Debriefing Form

We would like to thank you for your participation in this study. This form will provide you with some information about our study and why we are interested in examining these sorts of issues. The purpose of this study is to measure how well people understand Police Cautions, to determine which cognitive factors (short-term memory and listening comprehension skills) are related to passage comprehension, and to determine if altering the delivery of the caution contributes to further understanding.

The results from such studies may have important implications. The findings will help in assessing whether cognitive factors, such as short-term memory, verbal knowledge, and listening comprehension are associated with caution comprehension. This knowledge will also help identify whether the current cautions in use should be modified. Creating an understandable caution is important in helping ensure that suspect's rights are being protected and that statements gained by police interviewers are valid in court.

If you wish to further follow up on the results of this study you may contact Dr. Brent Snook, Department of Psychology, Memorial University of Newfoundland, St. John's, NL, A1B 3X9, Canada. Email: bsnook@play.psych.mun.ca. Phone: 709-737-3101. Please note that individual results are not available.

MEASURING POLICE CAUTION COMPREHENSION

Police Caution Comprehension

Free Recall Script

Instructions

I am going to play a short video and when the video is over I would like you to explain what you understood from the video.

Play Video

1. In your own words, please tell me what you understood and remember from the video.
2. Try to describe it in as much detail as possible.

Clarification

3. Is there anything else that you can remember and would like to add?

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Form A

Please Answer True or False to the following statements. Answer true when you believe that the statement is in line with your legal rights and answer false when you believe the statement violates your legal rights.

1. You can choose whether or not you want to answer any of the police officer's questions
2. The police can give you benefits in return for you talking to them
3. The police are not allowed to threaten you if you decide not to talk to them
4. What you say to the police during an interview cannot be brought up in court as evidence against you
5. You are allowed to hire a lawyer to get legal advice
6. You are allowed to talk to your own lawyer to get legal advice
7. You cannot talk to your own lawyer until after you answer the police officer's questions
8. The police can listen to all conversations that you have with a lawyer
9. You can talk to a government-provided lawyer and get legal advice
10. You can only get legal advice from a government-provided lawyer after you answer the police officer's questions
11. It will not cost you anything to talk to a government-provided lawyer
12. You need to know the phone number for a government-provided lawyer if you want to call them
13. The police will give me a telephone so I can call a government-provided

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Form B

Please Answer True or False to the following statements. Answer true when you believe that the statement is in line with your legal rights and answer false when you believe the statement violates your legal rights.

1. You have to answer the police officer's questions
2. The police cannot give you any benefits in return for you talking to them
3. The police are allowed to threaten you if you decide not to talk to them
4. What you say to the police during an interview can be brought up in court as evidence against you
5. You are not allowed to hire a lawyer to get legal advice
6. You are not allowed to talk to your own lawyer to get legal advice
7. You can talk to a lawyer before you answer the police officer's questions
8. nobody can listen to your conversation with the lawyer that you decide to call
9. The only way to get legal advice is to call your own lawyer
10. You can get legal advice from a government-provided lawyer before answering the police officer's questions
11. You will have to pay money in order to talk to a government-provided lawyer
12. The police will give you a telephone number to talk to a government-provided lawyer
13. You must have your own phone if you want to call a government-provided lawyer

Appendix B

Caution Coding Guide

MEASURING POLICE CAUTION COMPREHENSION

RCMP Caution Coding Guide

Right to Silence

Component 1a - You do not have to say anything unless you wish to do so

(Choice in speaking to police)

Correct Examples:

- “You don’t have to say anything to incriminate yourself”
- “Letting you know that you are free to talk if you want to”
- “Right to remain silent”
- “I don’t have to say anything at all”

Incorrect Examples:

- “Say nothing because there is always a presence”
- “Don’t say nothing”
- “You don’t have to say anything unless there is a lawyer present”
- “I am going to stay silent”?
- “You do not have to answer any questions until you speak to a lawyer”
- “By law you shouldn’t answer any questions until those rights have been read”
- “Unless you have counsel do not say anything” or “ have legal counsel before you say anything”

Component 1b - You have nothing to hope from any promise of favor

(The police cannot offer me benefits for talking)

Correct Examples:

- “I shouldn’t expect any favors because of what I say”
- “They cannot promise me anything”
- “You won’t be promised any favors by talking”

Incorrect Examples:

- “If you don’t say anything... it won’t give you no favor”;
- “no formal promises or anything”

Component 1c - nothing to fear from any threat whether or not you say anything.

(The police cannot threaten you If you do not talk to them)

Correct Examples:

- “Have no fear of threat”
- “You do not have to be... under any threat”
- “You won’t be threatened or whatever”
- “I can’t be threatened in anyway”
- “not going to be any action taken against me ah if I don’t give that statement”
- “You’re not going to be harmed in any way”

Incorrect Examples:

- “I’m not sure what he meant by hope of any fear or threat”

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- "You have got no worries about 'em doing anything" (not specific enough to indicate threat)
- "I don't have to be made of any threat... they won't hurt me whatever type thing I suppose"
- "You have no fear of what you say or what you don't say"

Component 1d - Anything you say may be used as evidence.

(If you do choose to speak anything you say can be used in court as evidence)

Correct Examples:

- "Like anything I say can be used as evidence in the courtroom"
- "It could be used against you in court"
- "He can use it against me in the court of law"
- "Anything that you say can and will be used against you in a court of law"
- "Anything you says can be used as evidence"
- "...and if I speak then he said might be against me as the evidence"

Incorrect Examples:

- "Anything can be used against a person"

Right to Silence Example Responses:

4 point example: "You don't have to say anything. Um, you can't be threatened. Ah, you won't be promised any favors by talking, and anything that you say can be used against you as evidence"

3 point example: "He said you have nothing to hope from any promise and nothing to fear from any threat and anything you say can be used as evidence"

2 point example: "you don't have to say anything...anything you say can be used as evidence in the court room"

1 point example: "you don't have to say anything to incriminate yourself"

Right to Legal Counsel

Component 2a – You can hire a lawyer

- Have / get / hire / retain / entitled to / right to / obtain – a lawyer, attorney, counsel, or legal counsel

Correct Examples:

- "You got a right to an attorney"
- "You have a right to a lawyer"
- "To have legal counsel to defend myself"
- "Right to legal counsel"
- "Obtain counsel"
- "You are entitled to legal representation"
- "Right to retain counsel"

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- “If I need a lawyer I can have one”
- “Right to retain a lawyer”
- “Right for counsel”
- “To get legal counsel”
- “I have the right to ask for a lawyer of my choice”

Incorrect Examples:

- “You have a right to have a lawyer there”- this is an incorrect statement;
- “I have been meaning to get a lawyer” – this is not in reference to the video;
- “Entitled to *see* a lawyer”
- “He telling you to find legal counsel” -?
- “They asked me if I wanted a lawyer”
- “Your right to have a lawyer present”
- “He can apply for counsel for me”

Note: The use of *need* is incorrect e.g., “you need a lawyer”

Component 2b - You can talk to a lawyer

- Talk / contact / call / consult / phone/ instruct / speak to – a lawyer, attorney, counsel, legal representation

Correct Examples:

- “To call a lawyer”
- “Contact a lawyer”
- “I have the right to speak to a lawyer”
- “Before you talk to the cops or to anybody else talk to a lawyer first”
- “I want to talk to a lawyer”
- “Phone a lawyer or counsel”
- “Instruct counsel”
- “Call a lawyer of your choice” or “you can call your lawyer”
- “If you need a lawyer you can get one”

Incorrect Examples:

- “Sit down and talk to your lawyer”

Component 2c - You can talk to or hire a lawyer right now

- Immediately / right away / before questioning / before talking to anyone

Correct Examples:

- “Make a call to your lawyer before you talk to anybody”
- “You can be able to call a lawyer once you’re been placed under arrest”
- “Before you talk to the cops or to anybody else talk to a lawyer first”
- “Right to retain a lawyer right away, without delay”

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- “Before you answer any questions”
- “I would have to have a lawyer before I speak to anybody”
- “Before you go any further”?
- “You have to either say that you want a lawyer, or no, before they proceed any further in the investigation”
- “He is really not allowed to question me until I do have legal counsel”

Incorrect Examples:

- “I can talk to a lawyer before I get put in the cell or before I go to court”.
- Any response indicating that they cannot access legal counsel immediately

Example Responses:

3 point Example: “I can contact a lawyer right away and it can be done in private” (2,3,4)

2 point example: “before you say anything you have a right to speak to your own lawyer” (2,3)

2 point example: “speak to a lawyer at anytime in private”

Notes:

1. If additional information that qualifies any of the rights in such a way as to make it blatantly incorrect is provided, then the component should NOT be coded as correct. Example – “It would be a *good idea* for me to have a lawyer”, “I have the right to contact *anyone*”, “I have to right to have a lawyer *present*”.
2. If additional information is provided that is incorrect but does not directly impact or contradict a given right, then the component should be coded as correct. Example – I have the right to a lawyer, and I can get him/her *when the police decide*”. In this case, component 2a would be coded as CORRECT while component 2c would be coded as INCORRECT.
3. With regards to component 2a and 2b, if the participant states that someone can *get* a lawyer for him, this is incorrect. They must express that they can get a lawyer for themselves or that they have the option to avail of legal services. E.g., “I have the right to speak to a lawyer”, NOT “He said he will get a lawyer for me” or “if I cannot afford one a lawyer will be appointed / provided to me” are incorrect.

Component 2d - You can talk to a lawyer in private

Correct Example:

- “Any session that I have with the lawyer, has to be in private”

Incorrect Example:

- “I can speak to a lawyer before I get put in the cell”

MEASURING POLICE CAUTION COMPREHENSION

Examples Responses:

4 point example: "I can hire a lawyer and speak in private to them before I talk to the police"

3 point example "Speak to a lawyer at anytime in private" – (2b, 2c, 2d)

2 point example: "I can speak to legal aid in private"

note: points for component 2d can be given in reference to any to components 2 a-c or components 3 a-e

Component 3a -You can talk to a government lawyer (Legal Aid / Duty Counsel)

- call / talk to / contact / avail /get help – legal aid / duty counsel

Correct Examples:

- "Contact a lawyer or legal aid"
- "Or call duty counsel"
- "You can call the duty counsel free of charge"
- "When you get arrested you have the right for legal aid"
- "Contact legal aid"
- "I have the right to avail of legal help from Newfoundland legal Aid"
- "He is willing to provide me with a phone number for like legal aid"
- "Asked me if I wanted a lawyer or legal aid type thing" (offering legal aid);
- "If you haven't got a lawyer duty counsel will inform you"
- "Right to speak to duty counsel"
- "You can call legal aid"

Incorrect Examples:

- "You can't afford one you go to legal aid or duty counsel"
- If they participant wasn't clear enough to express the component directly – for example, "they offer me right now they give me a choice they can.. ah lawyers available and the phone number and all that"
- "You don't have a counsel one will be provided for you"
- "You can go to duty counsel and they'll sort of set you in the right direction"
- "If they can't afford an attorney, and attorney will be provided to them by the courts."

Example responses:

2-point example: you can call a lawyer or legal aid (2b, 3a)

2-point example: " he'll give you a number for legal aid" (3a, 3d)

2-point example: "can provide the free duty counsel lawyer" (3a, 3c)

2-point example: " a telephone will be made available to you so you can contact duty counsel" (3a, 3e)

Component 3b - You can get legal advice before you answer any question (immediately / right away)

Correct Example:

- "He's really not allowed to question me until I do have legal counsel"
- "That number legal aid needs to be provided to me and have to be done without delay"
- "Before I answer any questions I have the right to speak to a lawyer"

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Example Responses:

2-point example: you can call legal aid before you say anything" (3a, 3b)

2-point example: "you can call duty counsel before you answer any questions"

Notes:

1. The participant must reference legal advice, legal aid or duty counsel, etc to receive credit for this component. They will get credit for component 2c for mentioning contacting a lawyer in general above
2. Use of *provided*, if they indicated that a lawyer would be provided by phone or that a number will be provided for contact that meaning is clear but "one [lawyer] will be provided for me" is incorrect.
3. If the participant indicates that they can have a lawyer or duty counsel right away they would receive credit for both 2c and 3b

Component 3c - You can talk to a lawyer for free

Correct Examples:

- "You have the right to obtain counsel and free of charge"
- "You can call the duty counsel free of charge"
- Will not cost anything
- I will not have to pay

Incorrect example:

- "I got a right to a instructs counsel if I can't afford one will be appointed to me I guess"
- "If I can't afford one" – does not count they need to state that it is free.

Notes:

1. To receive credit for this component the participant must state that this service is *free*. The participant will not receive credit for this component if they merely state that if they *cannot afford* a lawyer this service will be provided, as it is available to everyone regardless of financial status.
2. For component 3a if they mention a lawyer the participants must indicate that they can call / contact that lawyer. Some adverbs that should NOT be coded as correct include: get / have / provide / give / appoint / hire / right to. E.g., If I can't afford a lawyer one will be appointed / provided to me", : I can get a free lawyer". See above for correct examples.
3. Points 1 and 2 above also apply to this component

Example Responses:

2-point response: "you can call a lawyer free of charge" (3a, 3c)

Component 3d - You can have a telephone number to call to get legal service

- give / provide – telephone number

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Correct Examples:

- “He would provide the phone numbers”
- “They provide/give the number”
- “Need any advice for any legal information I can get the contact number”
- “If I don’t have lawyer he would provide a number for counsel for me”
- “If I can’t afford one, I guess legal aid and that they’re going to give me a phone number to call them”

Incorrect Responses:

- “He got the card and the number there for you to get one (lawyer)” – this statement is incorrect.
- “He will give you the contact information for it [lawyer]”
- “How I can go about getting legal aid and stuff like that, a telephone number?”

Note: The participant would not receive credit for this component if they indicate the police will provide them with the contact number to get / hire / instruct a specific lawyer. They must mention contacting / calling / speaking to / consulting - legal counsel, legal aid, duty counsel, legal advice, legal help, legal information.

Component 3e - A telephone is available to you to call this legal service

Correct Examples:

- “They will provide a phone”
- “A telephone will be made available”
- “He’d give you a phone”
- “I have a right to contact a lawyer about what I am being charged with and they’ll supply a phone and a number to do so”

Incorrect Responses:

- “A right to one phone call” – this information is incorrect.
- “You’re not allowed to use the phone, or if you need I to request a lawyer”

Example Responses:

4 point example: “the telephone number and a telephone will be provided for you to contact a lawyer free of charge” (3a, 3c, 3d, 3e)

2 point example: “or call duty counsel if you haven’t got no money or legal aid, and their telephone will be provided to you” (3a, 3e)

2 point example: if I want to talk to a lawyer that there’s going to be a phone there available for me to contact a lawyer” (2b, 3e)

Appendix C

No-Cautious Condition Materials

MEASURING POLICE CAUTION COMPREHENSION

Willingness to Participate

This research is being done through the Department of Psychology at Memorial University. This is a student research project being done with Dr. Brent Snook. It is about how people understand their legal rights. We would like to invite you to take part in this study. It will take about 15 minutes of your time.

You will be volunteering to take part in this study. So, you can end the session at anytime without any penalty to you. You will be given \$10 for taking part in the research. Your name will not be attached to any part of the study, and all your answers will be kept private. no individual results will be given. Also, no individual information will be given to the John Howard Society.

If you choose to take part, you will explain what you know about your legal rights. This explanation will be audio recorded. You can ask the researcher to turn off the recorder at any time. You will also be asked your age, gender, and ethnicity, to do some true or false questions. If you do not want to answer a question you do not have to.

For questions about this study please contact Dr. Brent Snook (Department of Psychology, Memorial University) at bsnook@play.psych.mun.ca or by telephone at 709-737-3101. The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-737-2861.

If you want to take part in this study, please make an appointment with the staff at the John Howard Society.

Sincerely,

Sarah J Chaulk, PsyD Candidate
Principal Researcher
Department of Psychology
Memorial University

Brent Snook, PhD
Associate Professor
Department of Psychology
Memorial University

MEASURING POLICE CAUTION COMPREHENSION

Information Letter

This study is being done through the Department of Psychology at Memorial University. It is about how people understand their legal rights. It will take about 10 minutes of your time.

You can chose whether or not you take part in this study. If you choose to take part you will be asked to explain your legal rights. This answer will be audio recorded. You can ask the researcher to turn off the recorder at any time. You will also be asked your age, gender, race, and to do a true or false questionnaire. If you do not want to answer a question you do not have to.

You are choosing to take part in this study. So, you can end the session anytime without any penalty to you. Your name will not be part of the study. All your responses will be kept private. no individual tests results will be given. Also, no individual test results will be given to the John Howard Society.

Your personal information will be kept in a computer file separate from all other information. This way personal information cannot be connected to the results from testing. All paper work will be stored in a locker at Memorial University. It will be destroyed about five years after the study is finished.

If you have any questions or concerns about the study, please ask the researcher. For other questions about this study please contact Dr. Brent Snook, Department of Psychology, Memorial University, at bsnook@play.psych.mun.ca or by telephone at 709-737-3101.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-737-2861.

Sincerely,

Sarah J Chaulk, PsyD Candidate
Principal Researcher
Department of Psychology
Memorial University
sarah.chaulk@mun.ca

Brent Snook, PhD
Associate Professor
Department of Psychology
Memorial University

MEASURING POLICE CAUTION COMPREHENSION

Police Caution Comprehension

Free Recall Script

Instructions

When someone is arrested or detained by a police officer because of their possible involvement with a crime, they read them their legal rights before talking to them about the events in question.

Today I would like you to explain your legal rights to me.

Prompts

1. In your own words, please tell me what you understand about your legal rights.
2. Try to describe it in as much detail as possible.
3. Is there anything else that you would like to add?

MEASURING POLICE CAUTION COMPREHENSION

Debriefing Form

We would like to thank you for your participation in this study. This form will provide you with some information about our study and why we are interested in examining these sorts of issues. The purpose of this study is to measure how well people understand their legal rights (e.g., right to silence, right to legal counsel).

The results from this study may have important implications. The findings will help identify whether the current cautions in use should be modified. Creating an understandable caution is important in helping ensure that your rights are being protected and that statements gained by police interviewers are valid in court.

If you wish to further follow up on the results of this study you may contact Dr. Brent Snook, Department of Psychology, Memorial University of Newfoundland, St. John's, NL, A1B 3X9, Canada. Email: bsnook@play.psych.mun.ca. Phone: 709-737-3101. Please note that individual results are not available.

